Please Check and Pass On

Don't Delay — See Page

Mr. _____

Mr. _____

Mr. _____

Mr. _____

Mr. _____

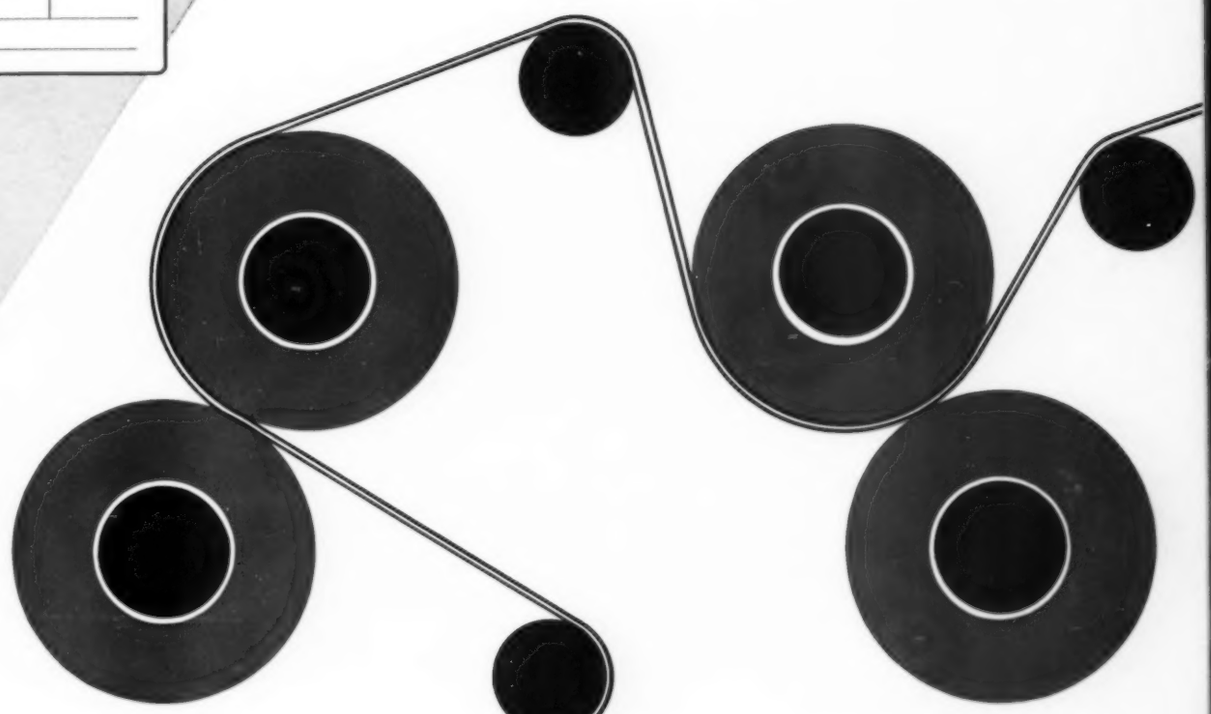
Mr. _____

Mr. _____

Mr. _____

For filing, return to _____

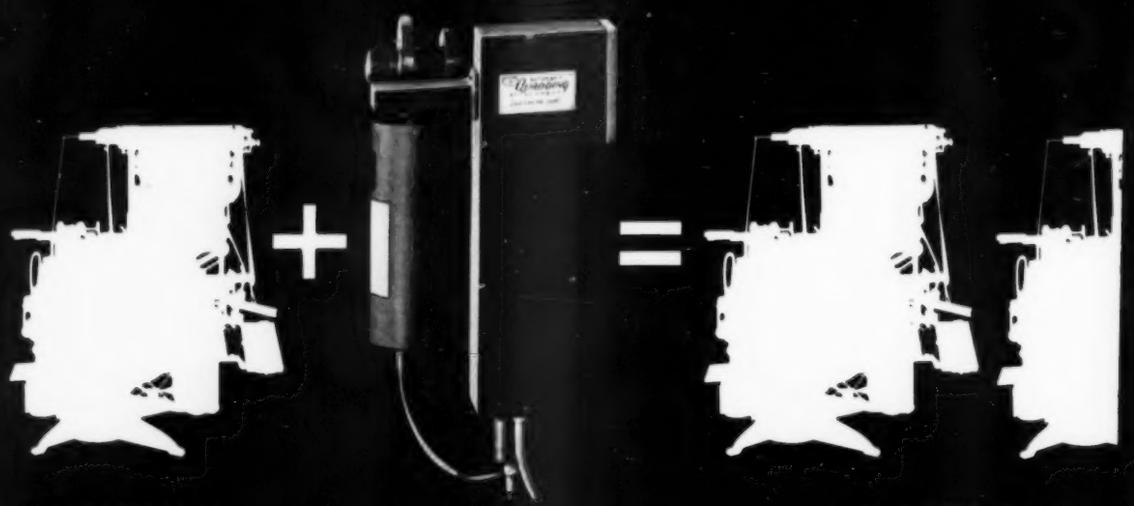
August 1956



PRINTING EQUIPMENT *Engineer*

an industry-wide technical publication

FOR QUADDING *Production*



The installation of a Selectro-Matic Quadder, **on your present equipment,** will increase production of quadded composition by more than 50%. The investment, compared to new-machine cost, is nominal, yet you obtain the output of a machine and a half. No additional floor space is required, and overhead is not increased.

These advantages are obtained because the Selectro-Matic Quadder automatically sets "white space". When set manually, this non-printing area actually costs more than the type itself.

Watch production rise, while costs remain the same, after you install a Selectro-Matic Quadder. Write today for descriptive 8-page brochure.

2984

BRANCH:
1327 BROADWAY, KANSAS CITY, MO.

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STREAMLINED DESIGN . . . for easier operation and maintenance

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HIGH VELOCITY chip removal system, with improved filter, removable metal dumping cart rolling on casters

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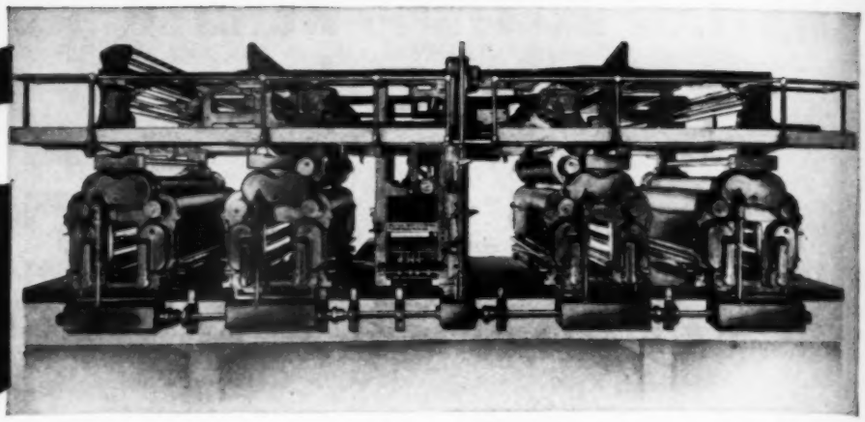
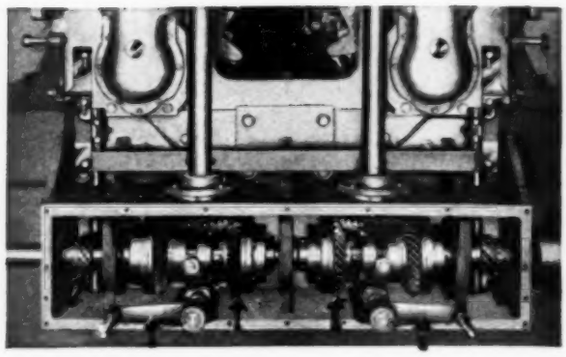
PRECISION PERFORMANCE . . . maintaining the same high standard of quality that for more than 20 years has made Premier the "most wanted" rotary flat plate shaver!

Sta-Hi Corporation
235 WEST WASHINGTON BOULEVARD
WHITTIER • CALIFORNIA

SPEAKING OF COLOR . . .



COLOR is best with the SCOTT "EXTRA HI-SPEED" PRESS



SCOTT Octuple Press with two extra color plate cylinders for spot color printing on outside and double center pages. Note the Double Reversing Drive — A throw of the clutch lever reverses cylinder rotation for color.

Each year, publishers, in increasing numbers, are making color facilities available to their advertisers.

SCOTT pioneered in the art of color printing. SCOTT printing equipment has demonstrated time and again its superior engineering and mechanical advantages. For example: it is unnecessary to change fountain gears or to open oil enclosures when rearrangement of color is required — to reverse your cylinder drive, simply move the lever outside the gear box to the desired position, "A Flick of the Lever!" Single and double reversing drives are available for all units.

All SCOTT gears remain in mesh permanently — hence, are always in perfect alignment — resulting in longer life and low cost maintenance.

Whether your needs be a standard press with reversible cylinders for color or superimposed color printing couples — consult SCOTT for technical and sound practical suggestions.

For spot or full color — SCOTT has the most effective and efficient color printing equipment. When making this all important capital investment — why accept less than the best?

Buy with CONFIDENCE - - - Buy SCOTT

WALTER SCOTT & CO., INC.

PLAINFIELD, NEW JERSEY

S-55-3

WRITE FOR THE NEW SCOTT COLOR PRESS BULLETIN

HAVE YOU EVER WONDERED WHAT PRINTABILITY IS?

Printability covers a multitude of things, each of them contributing to the faithfulness of the printing reproduction.

First you want smoothness. This applies to the surface. It is a matter of expert papermaking and coating to keep the pits and microscopic holes out of the sheet so that all parts of the printing plate will print.

Next you want levelness. This means that all parts of the sheet are the same caliper and that a printing plate applies equal pressures on all areas.

A smooth, level sheet of paper gives good coverage with a minimum amount of ink, and, if the paper has what is called good ink acceptance, the ink will not spread around the printing area, and halftone dots are not ragged.

Then a printable paper must have cushion. That means it must have enough resilience to take the pressure of the printing plate, and on release return to its original condition. All these factors, smoothness, levelness, good ink receptivity, cushion, influence the amount of time you spend on makeready. The less makeready, the sooner you get rolling, the less money spent on idle presses.

The more you learn about it, the more you realize that there's more to paper than meets the eye. You can rely on an expert papermaker such as Mead for thorough research into all these factors. We weigh them, then incorporate them in their due proportions so as to assure you the most satisfactory performance and most profitable, trouble-free press runs. Whether it's paper for letterpress, offset or gravure printing, you can get it *all* from Mead, Papermakers to America.

THE MEAD CORPORATION
Papermakers to America

MEAD papers

Sales Offices: Mead Papers, Inc., 118 West First Street, Dayton 2, Ohio ★ New York • Chicago Boston • Philadelphia • Atlanta

Color Printing

at its best with the

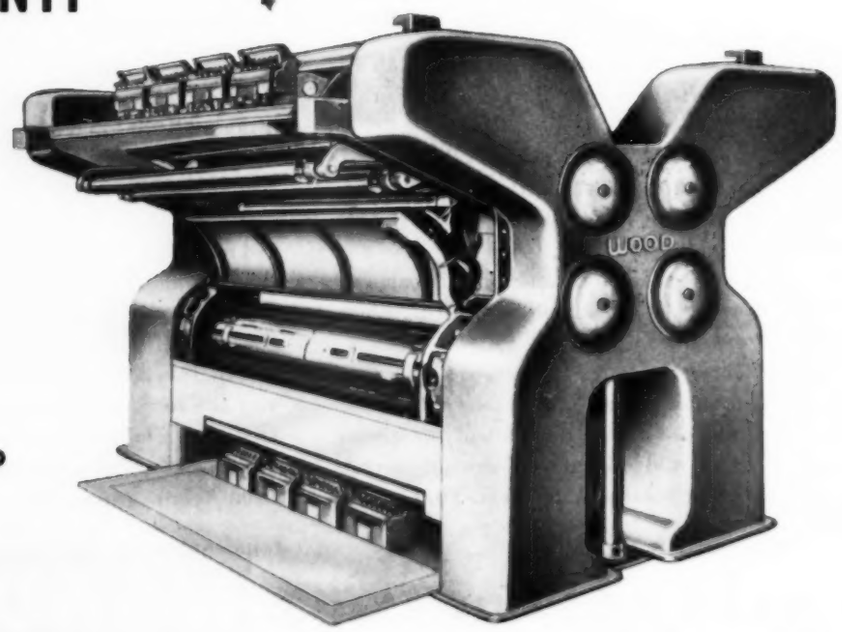
WOOD METROPOLITAN 4-COLOR UNIT

Your pressmen's job can be made easier with the WOOD Metropolitan 4-Color unit. Here is clean styling, proved engineering and precision workmanship that provides facilities for color printing that set a new high standard of quality.

The many outstanding features of WOOD color units commend themselves to publishers who want "top" quality color printing in every edition. WOOD 4-Color units give more than mere "satisfaction" because they produce everything you might expect from a truly fine printing press.

FEATURES

- Minimum back-lash—better register
- Adaptable for use with standard black and white units
- Reliable and Economical
- Completely accessible for easy servicing
- Utmost compactness
- Greater flexibility—color of your choice
- Low maintenance cost
- Precision workmanship for lasting service.



IF IT'S Wood IT'S GOOD

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY • Executive & Sales Office: 501 Fifth Avenue, New York 17, N. Y.

August 1956

An industry-wide technical magazine published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields, covering major processes.

PRINTING EQUIPMENT Engineer

Volume 86 Number 11

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PRINCIPAL ARTICLES

The Art of Buying Paper 43

Craftsman Pictorial Presentation 44

Raised Printing 50
By PHILIP MASTERPOOL

Phototypesetting—Relief Printing Plates 53
(Major Subjects at Research and Engineering Council)

High Speed Letterpress Printing 60
By H. DAVID McKINNEY

Flexographic Printing 62
By MR. FLEXOGRAPHY

Uses of Electronics In Graphic Arts Industry—VII 63
By FRANCIS A. WESTBROOK

Will It Be Stripping or Photocomposing? 66
By BERNARD R. HALPERN

R&E Council Adopts Concrete Objectives 68

Two Work Simplification Devices for Engraver and Phototypesetter 74

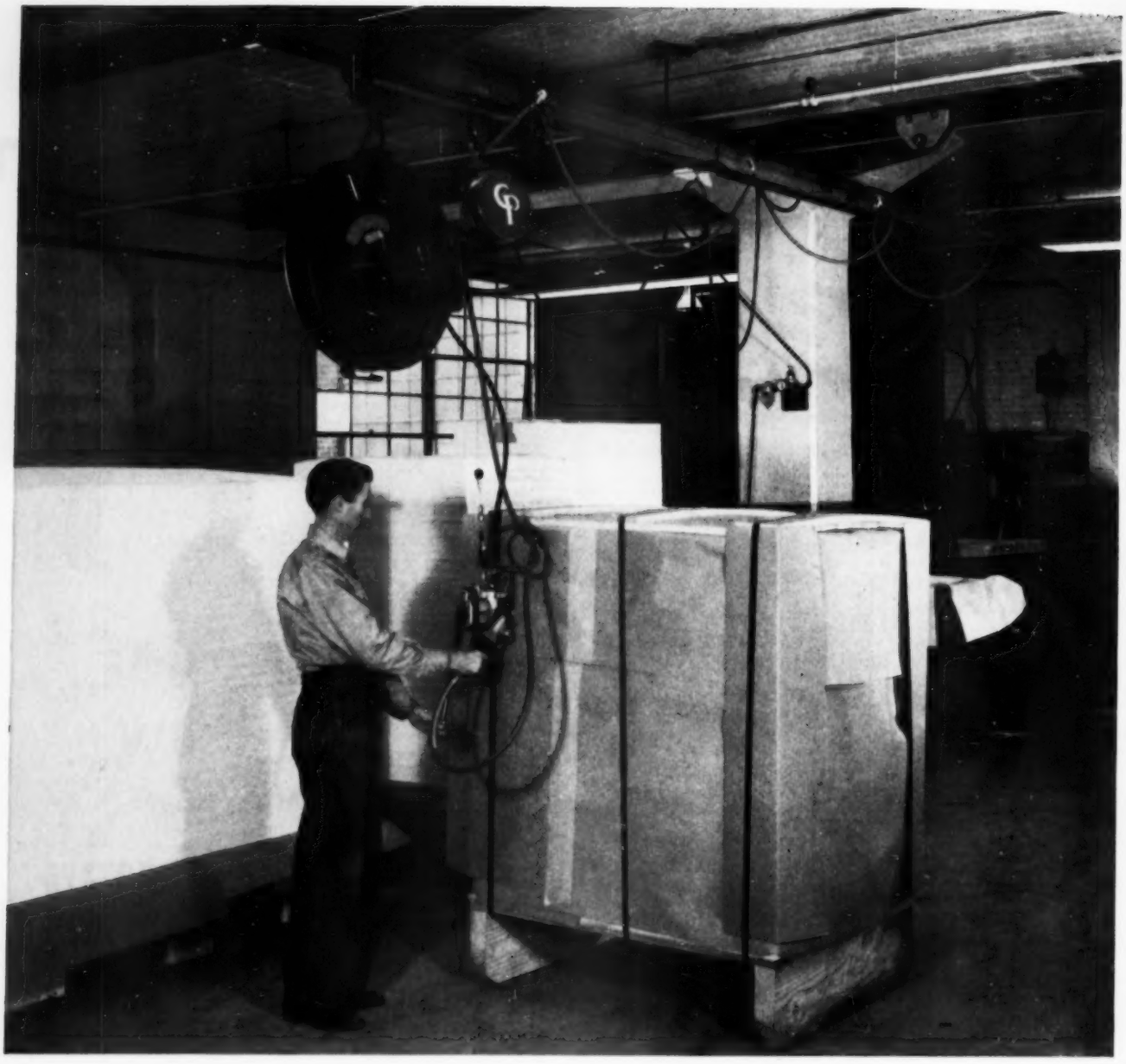
Regular Departments:

Graphic Arts Literature, 36
Patents for the Graphic Arts, 80
Graphic Arts Meetings, 84
News Items, 86
Books, 96
Advertisers' Index, 108

Equipment and Supplies 10

Jiffy Galley Lock, 10
Cutting and Creasing Jacket, 10
Cybergraph, 10
Heidelberg Cylinder Press, 18
Stereotype Matrix Molding Press, 18
Sheet Metal Feeder, 22
A.C. Unit Type Press Drive, 22
Proof Drier and Cabinet, 28
Automatic Rapid Printer, 28
Plate Thickness Gauge, 34
Film for ProType Machines, 34
Newspaper Press Roller, 34
Electronic Counter, 62
Graphite Container, 78
Challenge Proof Press, 100
Dexter Series 202 Collators, 103
Rotary Air Pumps, 105
Photocomposing Machine, 108

AN INDUSTRY-WIDE TECHNICAL MAGAZINE



Fast new way to strap paper skids

Strapping paper skids is fast and easy with a setup like this. The bridge crane gives mobility to the strapping equipment, and obstruction-free working space on the floor. Signode's new AP-34 air-powered strapping machine applies strap almost effortlessly, in seconds. This Signode design setup makes skid strapping a much more efficient and easy operation. It saves important time and, in addition, frees valuable floor space. A Signode field engineer will be glad to work with you to develop complete strapping stations in your plant, tailored to your needs. Let him help you save time and money now. Write:

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Do You Walk This Tight Rope Daily?

The balance between ink and water changes with every job you put on your press.

Sometimes there's a large solid and sparse type—sometimes there's a spot of color and scads of copy.

Often there's only a hint of color but it has to be clear and constant!

IDEAL MASTERLITH, GRAYTONE and LITHOCRAFT ROLLERS cannot solve all YOUR PROBLEMS — but they can help by being accurate in diameter, ink receptive and able to control moisture in the distributor position.

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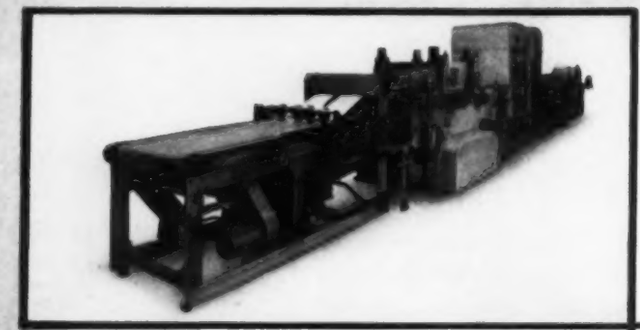
Hallmark of the finest printing and converting equipment...

Champlain

Rotogravure

High-speed precision-register printing on practically *any* stock in *any* practical multiple of colors. Meet the ever-increasing demand for more and better wrappers, labels, and cartons for packaged goods with Champlain *inline* rotogravure. "Speedry" ink fountain insures true reproduction of color and instantaneous drying. Print from roll stock 8" to 44" wide.

To complete a* CHAMPLAIN *rotogravure press—a* CHAMPLAIN *inline precision delivery unit:

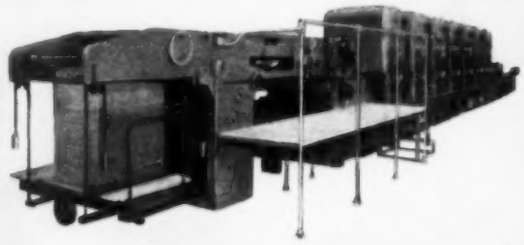


Cutting and Creasing Press

In one pass – only *once* through the press – it cuts, creases, and automatically yet thoroughly strips 7,500 to 10,500 cartons per hour from a continuous web. Platen press quality at *better* than cylinder press speeds.

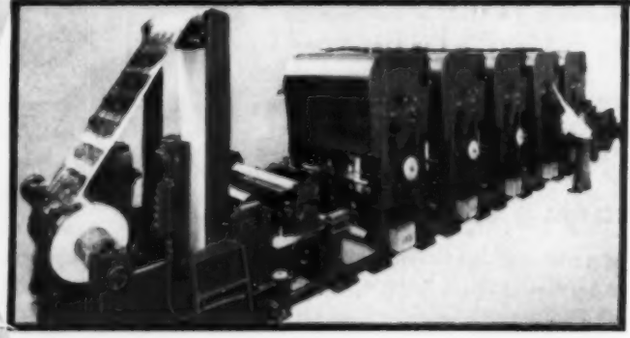
Sheet Delivery

Delivers from 8,500 to 12,500 square cut sheets per hour with 1/64" accuracy. *Faster than any other standard sheeter.* Positive sheet handling eliminates damage. No waste trim.



Rewind Press

Hydraulically-actuated constant-tension roll unit rewinds from 400 to 800 ft. per min. Positively synchronized to press for balanced speed, tension, and control. Single, multiple, and staggered-roll models.



PLUS ***– a complete line of other equipment for all printing and converting needs.***

LETTERPRESS PRESSES, FLEXOGRAPHIC PRESSES, SPECIALTY PRESSES—for Tag, Chart Paper, End and Bakery Seals, Die Cut Labels.

CUTTING AND CREASING EQUIPMENT—Roll Fed Swing-Type Reciprocal and Stationary Die Cutting Presses – Vertical Extruding and Eccentric Punches and Perforators—Rotary Blankers.

SPECIALTY CONVERTING EQUIPMENT FOR INLINE USE—Rotary Embossers – Perforators and Score Units – Slitting Equipment – Hot Melt Thermoplastic Applicators – Special Delivery Equipment.

AUXILIARY EQUIPMENT – Automatic Electronic Register Controls (for multicolor and fabrication register on roll-fed equipment) – Automatic Web Splicers.

... and for special engineered equipment:

Champlain's ability to design and build special units is based on years of experience in developing inline printing, fabricating, and delivery equipment.

Champlain

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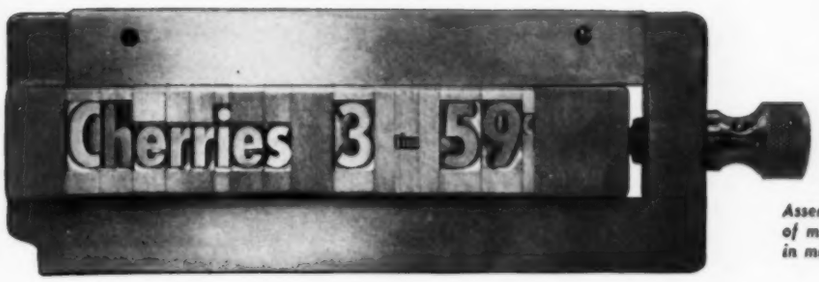
88 Llewellyn Avenue, Bloomfield, N. J. Chicago Office: 520 N. Michigan Avenue, Chicago 11, Ill.

Set Grocery Display the all-slug *Ludlow* way



Assembled matrices of middle slugline in matrix stick

Grocery display ceases to be a problem with a Ludlow in the composing room. Simplicity of 2-line composition is shown here.

1. The Ludlow matrices for the middle slugline were assembled in the matrix stick and a slug cast.
2. The top line (16 oz.) and the bottom blank slugline were then cast in slugs fitting perfectly with the middle line as illustrated below.

Ludlow grocery composition eliminates all cutting and fitting of lines. One-line and three-line grocery combinations are likewise handled easily and rapidly. Send for full information today.

2-line composition as cast, opened to show make-up of individual slugs

Cherries 3 16 oz. tins 59c

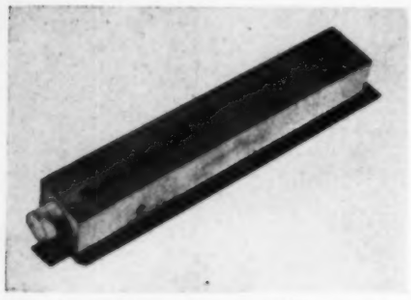
Ludlow Typograph Company 2032 Clybourn Ave., Chicago 14

Equipment and Supplies

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT Engineer, 1276 West Third St., Cleveland 13, O.

Jiffy Galley Lock

Made of a kiln dried hard wood, (soaked in preservative), the Jiffy Galley Lock is furnished in a variety of widths to lock type matter in galleys for proofing or for storage in the galley. The Jiffy Galley Lock, states Foster Manufacturing Co., is of simple construction. Height of the bar is approx. 0.750 in.; thickness from front of back of bar is 72 pts. The spring plunger is ½ in. diam. and extends from one end of the bar ⅜ in.; its throw is approx. ¼ in. Jiffy Galley Locks are furnished in the following widths: 3½ in., 6 3/16 in., 8¾ in., 10 in. and 12 in. If necessary at any time, a wide galley lock bar can be cut down on a composing room saw-trimmer for service in narrower galleys. The Jiffy Galley Lock wood is resistant to type washes. For further information, please mention PEE No. 186 in your request.

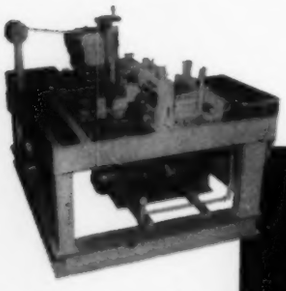


Cutting and Creasing Jacket

The Bar-Plate Mfg. Co. has developed the Bar-Plate Bar Turnbuckle Jacket. This cutting and creasing jacket was primarily designed for two color presses or for three color presses where the printing attachment is above the first cylinder. The Bar-Plate Bar Jacket, it is stated, is proportionately equal to a regular cutting and creasing jacket and eliminates the need for

(*Continued on Page* 18)

Cybergraph, the electronic computer for copyfitting, is manufactured by the Cybergraph Company. With this instrument, the printer can solve such problems as: How long a line will a certain number of characters in a certain size type face make? or, What is the greatest number of characters of a certain size type face which will fit into a specified length of line? or, How many lines of copy set in a certain type size will a measured batch of original copy make? The instrument is operated by feeding information into the Cybergraph by dial settings. The electronic computer then does the figuring and the answer is returned. These machines are not sold; they are leased. But the manufacturer agrees to maintain and service each machine and keep it in peak condition during the life of the leasing agreement. For more information, please mention PEE No. 205 in your request.



Heavy duty cross feed magazine labeling machine with rotary head.

The Model S wrapping machine with Inserting unit and rotary labeling head for installations mailing extremely large quantities of magazines at maximum speeds.

MAGAZINE WRAPPING OR MAGAZINE LABELING . . .

MAGNACRAFT MAKES A MACHINE

for every Mailing Purpose!

Wrapping or labeling . . . Magnacraft does either or both operations for you *faster* and *better* than ever before! *Magnacraft has sold more magazine wrapping machines than all other manufacturers combined!* Our experience can help you with the proper selection of the right labeling or wrapping machine to fit your particular needs. Find out for yourself how Magnacraft machines will cut your costs and reduce your mailing time!

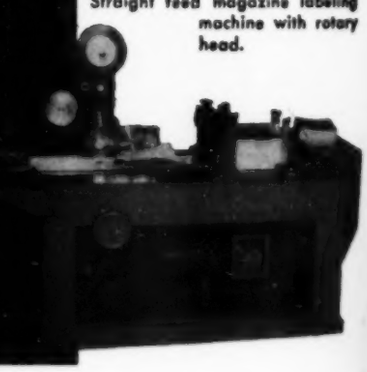
Write for complete information now!

Magnacraft MANUFACTURING CO.

3138 W. CHICAGO AVE.
CHICAGO 22, ILL.

Model E — Combination wrapping and labeling machine. Magazines can be wrapped and labeled or labeled only on this heavy duty high speed production machine.

Straight feed magazine labeling machine with rotary head.



Top roller craftsmen build them

ALL-SYNTHETIC
RUBBER ROLLERS
COMPOSITION ROLLERS
LITHOGRAPH ROLLERS
MAKE READY PASTE
PADDING GLUE
LONG LYF ROLLER
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Top printing craftsmen use them

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225 N. New Jersey St., Indianapolis 4, Ind. — 258 E. 5th St., St. Paul 1, Minn.

W. S. MEGILL 1918 Lawrence St., Denver 2, Col. DISTRIBUTORS SPRAY SALES 6110 Atlantic Blvd., Maywood, Calif.

THE INDIANAPOLIS STAR
THE SPOKESMAN-REVIEW
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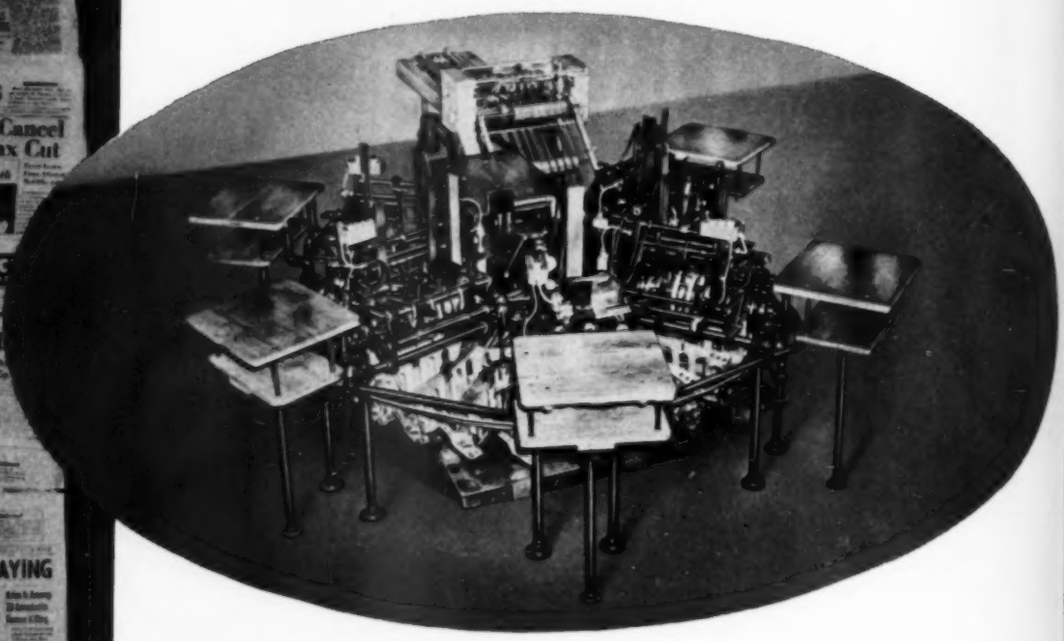
PRESIDENT SEIZED IN PANAMA SLAYING
BABIES DIE OF EXPOSURE IN PUENTE
Los Angeles Times
A. ACCIDENTS MOUNT: JAIL 40 DRUNK DRIVERS
Happy New Year to All Our Readers
The Vancouver Sun
Dulles Says Danger Of War Lessening
The Detroit News
SHEPPARD READY TO REST HIS CASE
THE MILWAUKEE JOURNAL
Officer Shoots Store Burglar on Shorewood Athletic Field
THE TELEGRAM

...more inserts per Dollar



The new four- or five-hopper 24P Sheridan Stuffing Machine offers you the flexibility required to meet all insert conditions.

Advanced engineering gives faster, neater and more economical delivery in various combinations, into jacket or wrap-around sections, at operating speeds up to 12,000 per hour. There are no hit or miss insertions—you get perfect count for every edition. Compact design of the 24P saves considerable floor space.

No matter how tough your stuffing problem may be, you can depend on Sheridan to solve it. A representative will be pleased to explain how the 24P Sheridan Stuffing Machine can help you get out a better looking edition.

For newspapers having more than five sections the Sheridan 48P is available, and for those with two or three sections, inquire about the newest Sheridan 12P.

Write today for our illustrated booklet, without obligation.

SINCE 1835

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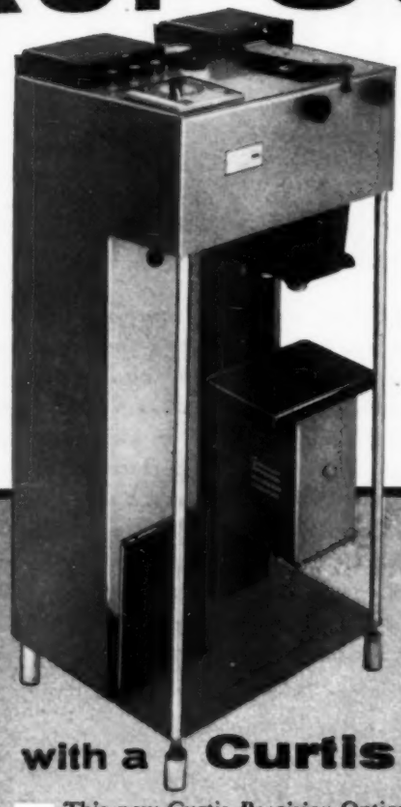
600 W. Jackson Blvd., Chicago 6, Ill.
183 Essex St., Boston 11, Mass.
24701 Crenshaw Blvd., Torrance, Calif.
52/54 High Holborn, London, W.C. 1, England

Here's how Curtis' *simplified*

ROP COLOR works...



COLOR is accepted everywhere as one of today's most powerful and effective selling tools. Movies, T.V., magazines and other media have conditioned *your readers* to look for, and expect, this added buying incentive. That's why many forward-looking, progressive newspapers are now using Curtis *simplified* ROP color in their news, sports and editorial features to increase prestige, readership and profits. Write for full details on Curtis simplified ROP color.

Even with your present equipment
you'll make better, high-fidelity separation negatives—sharper, clearer—
with a Curtis precision Optical Printer!

This new Curtis *Precision* Optical Printer can be used with your present equipment to produce the finest quality color separation negatives *from your color transparencies.* It assures full color definition because it's standardized, almost automatic operation eliminates guesswork and errors. It rapidly makes *three 4 x 5 automatically balanced and color corrected separation negatives from your color film transparencies* . . . works equally well with 35mm, 2¼ x 2¼, 2¼ x 3¼ or 4 x 5's.

Designed specifically for ROP Color, the Curtis Optical Printer minimizes the human element in the making of color separation negatives. Determination of exposure is accomplished with a simple but effective system.

Two lenses of the finest quality are turret-mounted for instantaneous change to provide magnifications from 1x to 6x. This permits any portion or the entire area of the subject to be enlarged with the finest possible definition. Color separation filters are changed by three color-coded knobs on the top panel.

Additional features include a light level so high that it provides a brilliant projection of the subject, even at highest magnifications, which assists greatly in the evaluation of picture quality. Negatives are pre-registered, either by pin or stop method.

For larger size transparencies, the Curtis Commercial Printer makes contact negatives from single transparencies or groups up to 10 x 12 inches. Register and exposure control are accomplished by the same proven methods utilized on the Curtis *Precision* Optical Printer.

AND HERE ARE OTHER CURTIS AIDS TO *better* COLOR REPRODUCTION!

CURTIS ONE-SHOT COLOR CAMERA

Uses ordinary black and white panchromatic film . . . **simultaneously** makes three balanced color separation negatives of subject **with a single exposure.**

CURTIS COLOR ANALYST

An optical unit that uses filters and mirrors to produce a single, full-color image from three black and white separation prints. Shows clearly the need for and extent of any color correction required. CAN BE USED WITH YOUR PRESENT EQUIPMENT TO ASSURE HIGHEST FIDELITY IN COLOR AND TONE.

For full details on Curtis Color Printers . . . optical and contact models . . . let us send you this FREE color booklet, "ROP Color Simplified." It contains detailed facts for your consideration and there's no obligation.

Thomas S. Curtis, Sc.D.
CURTIS LABORATORIES, INC.
2718 Griffith Park Blvd., Los Angeles 27, California

Please send—without obligation—FREE color booklet, "ROP Color Simplified."

Name_____
Newspaper_____
Street_____
City_____ Zone_____ State_____

The surest way to more printing production profits is to increase output of your present equipment without sacrifice in quality. And, if you can improve quality at the same time, you are competition and hard to beat!

ANNOUNCING

THE NEW, REVOLUTIONARY OXY-DRY SHEET CLEANER

You BUY MORE PROFITS when you purchase the OXY-DRY SHEET CLEANER. Actual tests* show that your presses will deliver about 5% *more* impressions per hour, you'll stop the presses for wash-up about 12 times *less* per shift, save about 100 press sheets and the ink wasted in restarting after washups. This means that inside one year the OXY-DRY SHEET CLEANER will pay for itself...after that, it's all profits for you. Maintenance, repair and service will be negligible...the equipment is engineered to last the life of the press.

The OXY-DRY SHEET CLEANER is the *only* sheet cleaner that uses both air and suction ★ Operates within ⅛" of sheet for positive consistent cleaning action ★ Improves register control ★ Dry spray can be used *every* time sheet goes through the press ★ Can be installed in two hours on either web or sheet fed presses ★ Flexible—one vacuum-blower differential unit can be moved from press to press to operate any OXY-DRY cleaner head in your plant ★ Successful installations have been made in Meredith Publishing Co., Kable Bros., Popular Mechanics and other leading printing plants where speed and quality are constant aims...Increased profits they are getting can be yours too ★ To get more information on OXY-DRY SHEET CLEANERS, write, wire or phone us now.

* 5 Color Cottrell 36" x 48"—Sheet Fed
More details on request

OXY-DRY *means more profits for the graphic arts industry*

OXY-DRY SHEET CLEANER CORPORATION

1134 West Montrose Avenue, Dept. P E, Chicago 13, Illinois

NEW YORK **CHICAGO** SAN FRANCISCO

Photo below shows close-ups of the OXY-DRY SHEET CLEANER vacuum-blower head and head face.

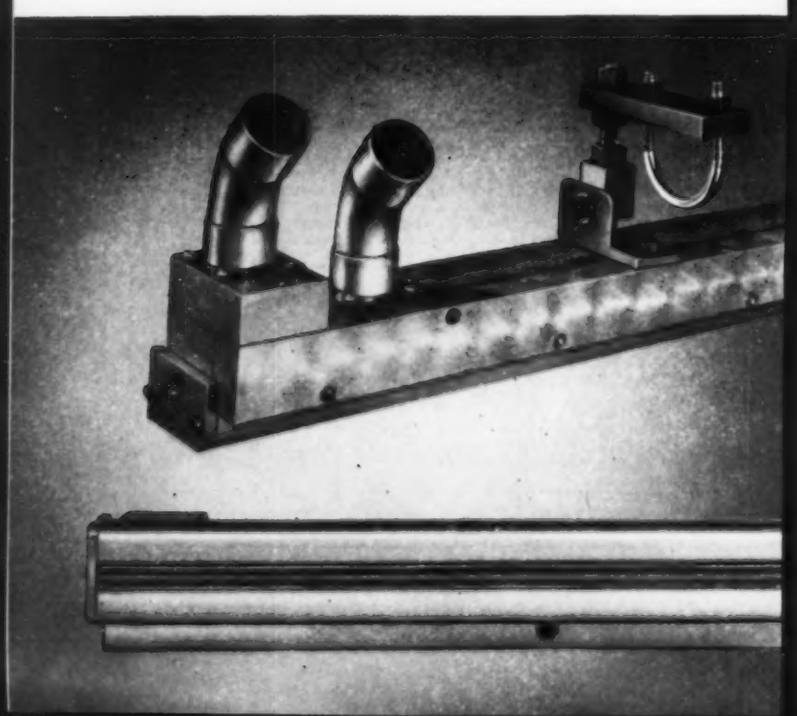
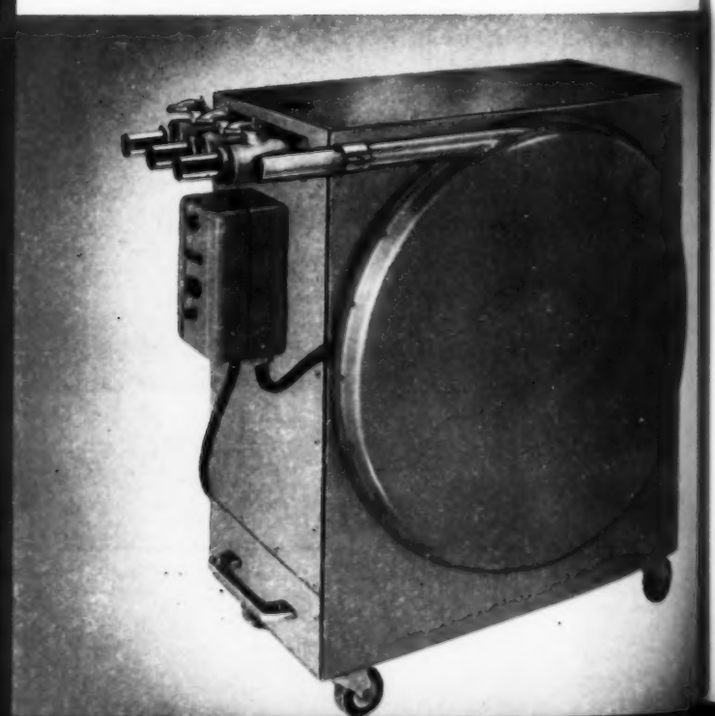


Photo below shows the vacuum-blower differential unit for the OXY-DRY SHEET CLEANER



What's new in MIAMI

¶ The 60th Anniversary of the founding of the Miami Daily News.

¶ Ground is broken for the new $5,000,000 Miami Daily News Building . . . typical of the spirit of progress which has made the News a truly great newspaper.

¶ All presses of the Miami Daily News are being equipped with Hurletron Automatic Register Controls for ROP Color.

Now . . . another of America's fine dailies will soon be able to offer the finest in ROP color printing. This modern Hurletron equipment maintains accurate, automatic register of all colors within a few thousandths of an inch . . . reduces waste at splices . . . cuts registering-in time . . . provides a continuous indication of register at all times.

When you're ready to consider the purchase of color register controls, remember these facts about Hurletron:

1 **Hurletron is the only automatic color register control now in use on newspaper presses in the United States.**

2 **Hurletron is the only automatic color register control specifically designed for ROP color.**

3 **Hurletron is the most economical to install, operate and maintain.**

Let us tell you the full story about Hurletron Controls. With no obligation on your part, write today. Let us know when you'd like a Hurletron engineer call on you.

N

RLETRON

ELECTRIC EYE EQUIPMENT COMPANY

1930 EAST FAIRCHILD STREET, DANVILLE, ILLINOIS

Manufacturers of: Hurletron ROP Color Registration Controls, Automatic Controls of Caliper and Weight on Paper and Board; Center Line and Side Web Guide Controls; Cut-off and Back-Up Controls; Slitter Controls; Moisture Controls.

N HURLETRON

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They're miles ahead!

Genuine Mercury blankets are made only by Rapid Roller Company. Look for the green stripe on the back.

You get the big improvements first in

MERCURY PRODUCTS

Ever since the infancy of modern photo lithography, Rapid Roller Company research has been continuously developing important improvements in lithographic blankets and rollers. To keep your shop up to date, always specify Mercury rollers and blankets.

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MAIN OFFICE AND FACTORY
FEDERAL AT 26TH STREETS • CHICAGO 16, ILLINOIS

EASTERN SALES OFFICE
800 McCARTER HIGHWAY • NEWARK 5, NEW JERSEY

IMPORTANT: There Are NO OTHER Rapid Roller Company Branches or Factories

Headliner brings new Color era to Peoria Journal Star

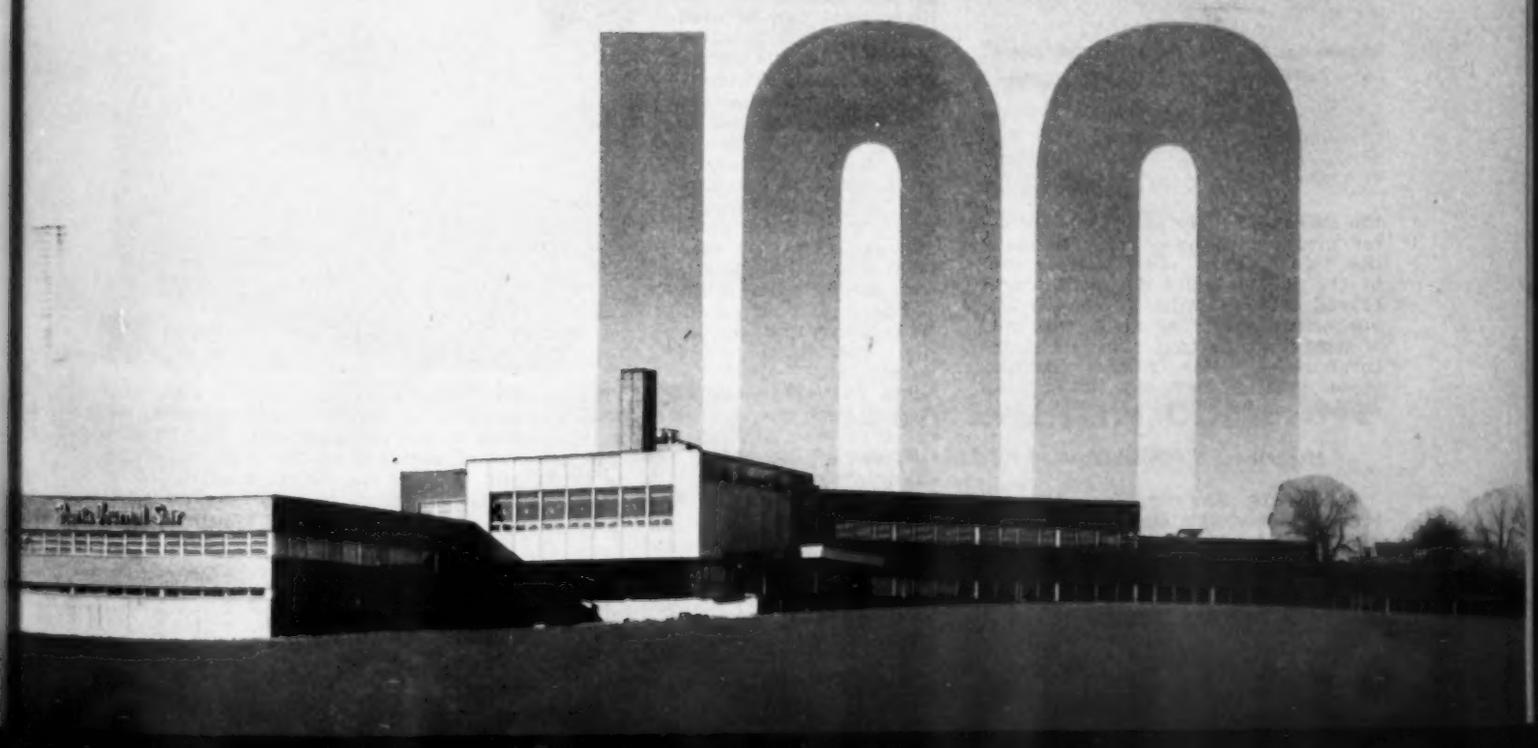
A second century of colorful progress has been inaugurated by the *Peoria Journal Star*, which has just moved into an imposing new building equipped with the most modern production equipment—an expansion program costing in excess of $2,000,000.

Largest newspaper downstate, the *Peoria Journal Star*—publishing morning, evening and Sunday—blankets 13 solid, prosperous counties in central Illinois, one of the outstanding test markets in the Middle West. Daily circulation exceeds 100,000.

Extensive promotion of ROP color printing is planned by the *Journal Star*, centered around its new 8-unit HEADLINER press with double color half-decks for most faithful reproduction of fine halftones and type. Continuous Ink Feed and fingertip Colortrol assure unexcelled printing quality. The HEADLINER is equipped with Goss REELS-TENSIONS-PASTERS. Color cylinders are equipped with electric eye devices for register.

The *Peoria Journal Star* also has the first new Goss PLATE PERFECTOR for high speed, efficient production of accurate stereotype plates for both black and ROP multi-color printing.

THE GOSS PRINTING PRESS CO.



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YOUR
REPIGGING
CAPACITY
with a
NOLAN
Remelter

600 lbs. to 10 tons capacity. Adaptable to gas or electric heating.

NOLAN CUTS REPIGGING TIME BY 50%. From cold start, a full pot melts in LESS THAN 2 HOURS . . . 1 hour for additional loads . . . with REDUCED OXIDATION, DROSS AND METAL LOSS. You need a MINIMUM OF NEW METAL. Drip-proof valve ELIMINATES HAND LADLING. The NOLAN Remelter SAVES SPACE . . . installed against a wall or corner. Precision construction MINIMIZES MAINTENANCE COSTS.

WRITE TODAY
for complete information . . . or for a call by a NOLAN Representative.

NOLAN Remelter can be CUSTOM-DESIGNED to meet your specific requirements with the maximum economy.

NOLAN Corporation
DEPT. 28 ROME, NEW YORK

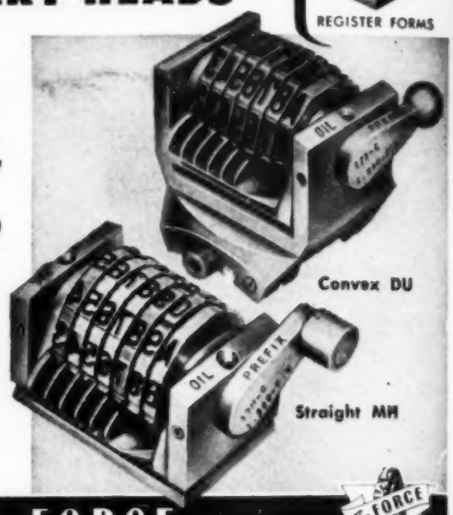
NUMBERING
always pays off
FORCE
ROTARY HEADS

CONTINUOUS FORMS
SNAP-OUT FORMS
REGISTER FORMS

Now, number forms with high-speed accuracy, top profits. Force MH or DU Rotary Heads (both available either straight or convex) are designed for today's fastest presses. Let us send catalog.

•

Write for Force Rotary Head Operating and Maintenance Manual



Convex DU
Straight MH

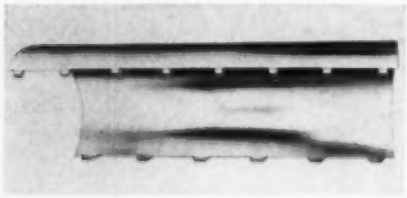
WM. A. FORCE
& COMPANY, INCORPORATED
216 NICHOLS AVENUE, BROOKLYN 8, N. Y.

The FORCE of NUMBERS

Equipment & Supplies

(Continued from Page 10)

converting the second cylinder. There are no bends on the guide end of the jacket, it is claimed, and, therefore, rupturing of the jacket at this point is reduced to an actual minimum. The initial installation of the Bar-Plate Bar Jacket involves moving



the sheet stops, fly shoes, and transfer grippers so as to accommodate the 1¼ in. bars. On the rear end of the jacket, holes are drilled and tapped into the ribs to receive the anchoring iron. The anchoring iron is used to pull taut the jacket by turnbuckles. For further details, please mention PEE No. 192 in your request.

Heidelberg Cylinder Press

Heidelberg Eastern, Inc., is currently displaying a Heidelberg Cylinder 21 in. by 28 in. press, manufactured by Schnellpressenfabrik AG Heidelberg, Western Germany. The Heidelberg Cylinder press is a single-revolution press with a production from 2000 to 4000 IPH. Net weight of the unit is 10,350 lbs., including 1 T. of weight in the impression cylinder. Overall length is 10 ft. 6 in.; overall width is 6 ft. 3 in.; height to top of feeder is 4 ft. 8 in.

Features of the Heidelberg Cylinder include a bank of 12 inking rollers and 4 form rollers. The inking sys-

(*Continued on Page* 22)

Stereotype Matrix Molding Press—Lake Erie Engineering Corp. has announced an addition to its line of Directomat stereotype matrix molding presses. Identified as the Series 68, the Directomat can be used to mold rubber printing plates and plastic stereotype ad mats. Thermoplastic or thermosetting plastic plates, as well as plastic electrotype molds and baked stereotype mats, may be molded. The Series 68 Directomat is self-contained and is ready for connection to the electric and cooling water lines. All parts of the hydraulic pumping unit, including the motor and valves, are located beneath the front work table. The pumping unit is equipped with a removable cover. Four long gib guides with angular bearing surfaces are fastened to the edges of the main housing for registration of the press platens. The finished surfaces of the guides bear against similar surfaces on the four corners of the moving platen. The 24 in. by 31¾ in. area of the platen is supported by a 26 in. diam. ram. The platen area is large enough to accommodate a full newspaper page locked in a type chase. For further details, please mention PEE No. 181 in your request.

Shouting from the Housetops...

LETTERHEADS

*Look better
*Print better
*Serve better

ON BRIGHTER, WHITER

WESTON BOND

25% RAG CONTENT

Brighter, whiter Weston Bond really does things for letterheads. Blacks look blacker, colors sparkle, designs take on a new dimension.

Along with a brighter, whiter white, new Weston Bond gives you a decided improvement in formation, texture and finish. All of which means that letterheads not only *look* better but *print* better and *serve* better.

Shout as loud as we like about brighter, whiter Weston Bond, the proof is still in the printing. See for yourself how new Weston Bond will put your letterhead jobs a big cut above competition. Order a carton today.

YOUR WESTON MERCHANT

has Weston Bond in a complete range of sizes, weights and colors plus opaque white and white litho finish. Also envelopes to match and typewriter cut sizes in junior cartons . . . a truly complete line.

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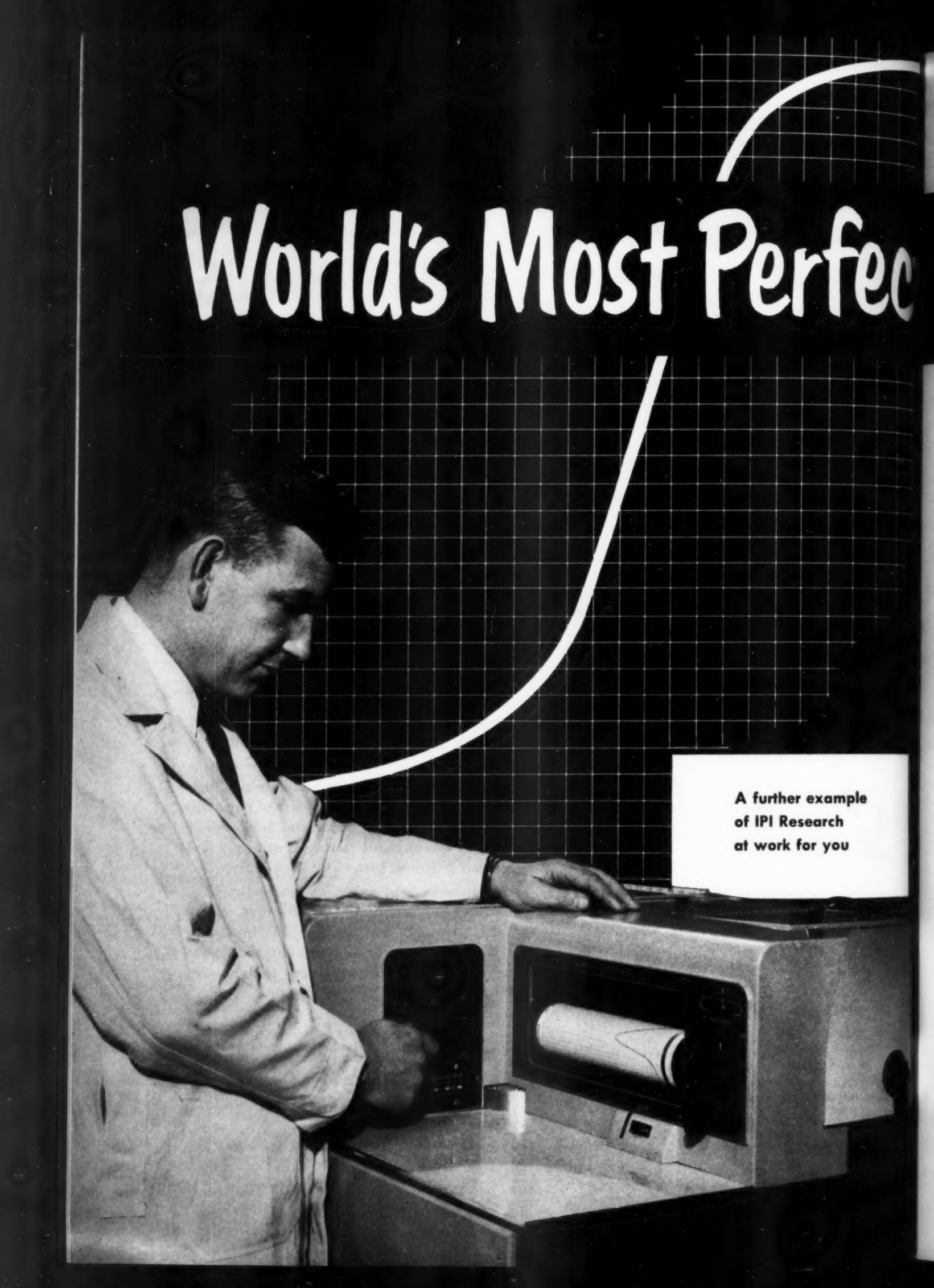
Makers of Fine Papers for Business Records Since 1863

World's Most Perfec



A further example
of IPI Research
at work for you

ec Memory For Color

GIVES YOU PRECISE, PERMANENT STANDARDS FOR COLOR CONTROL

Here is a precision laboratory instrument which measures and records color automatically and accurately. It is the latest model of the General Electric Recording Spectrophotometer—the first of which was built to specification by G-E engineers for the IPI Research Laboratories.

A trained human eye can distinguish one hundred thousand colors, yet the human mind cannot remember even one color with any degree of accuracy. The Spectrophotometer identifies millions of colors . . . measures, analyzes and memorizes them . . . writes its own exact and permanent record of any color sample.

While all pigments change with time, the curve plotted by the Spectrophotometer remains unchanged over the years. The original color could be accurately reproduced tomorrow or one hundred years hence for checking against your visual color standards.

But the precise measurement of color is only one of the many important contributions to printing ink progress that have come from IPI's broad program of fundamental research. Another is the development of new inks that have revolutionized letterpress printing and offset lithography. One example is IPI Vaporin Inks that heat-set in a split second and are largely responsible for today's high speed magazine printing. And there are the remarkable high gloss IPI flexographic inks for package printing—new inks for cellophane, polyethylene and foil.

This "passion for improvement" is the working philosophy behind all IPI research. Scores of project groups are constantly at work in the IPI laboratories . . . concentrating all of their efforts on the development and improvement of printing inks that will best serve the changing needs of printers everywhere.

It is this IPI leadership in ink research that gives you the greatest assurance of continued high quality in printing inks. You can always rely on IPI—for better inks, better printing.

IPI, IC and Vaporin are trademarks of Interchemical Corporation

Interchemical

CORPORATION

INTERCHEMICAL PRINTING INKS

Printing Ink Division · 67 West 44th Street, New York 36, New York

RELY ON IPI FOR LEADERSHIP IN INK RESEARCH

Equipment & Supplies

(Continued from Page 18)

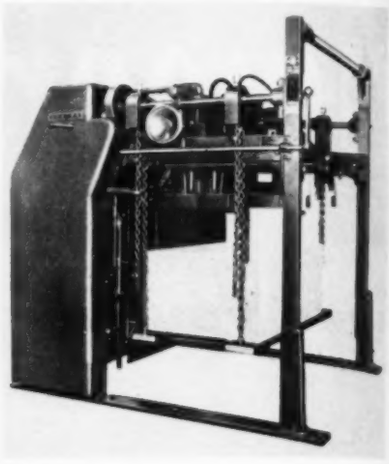
tem can be cleaned in a matter of minutes automatically. The reciprocating mechanism of the bed of the press is governed by a cam and gear arrangement. Fast production is made possible by cutting out the portion of the impression cylinder during the idle phase of the bed travel and accelerating the bed speed until the beginning of the next printing phase. This allow 25% more time for each impression without corresponding reduction in the number of sheets produced per hour, say the sponsors.

Other features of the press include spring loaded grippers throughout which eliminate the necessity for adjustments for tension. A tray arrangement enables the pressman to remove printed sheets from the delivery table without stopping the press. All adjustments and controls are on one side and end of the press. Both feeding and delivery are at the same end of the press. Both wet and dry spray attachments are included as standard equipment.

For more information, please mention PEE No. 197 in your request.

Sheet Metal Feeder

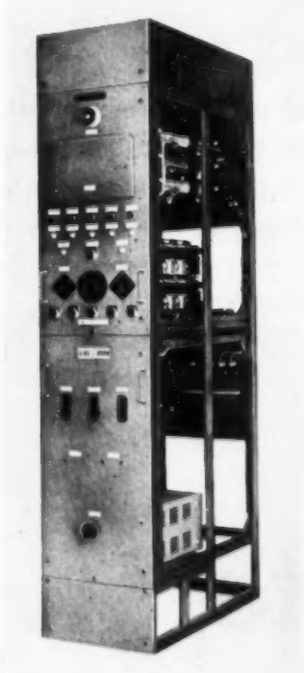
The Dexter Folder Co. has redesigned its 6000 lb. capacity Metal Sheet Feeder to handle sheets at rates up to 125 per min. throughout multi-shift operating schedules. The feeder is operated to automatically separate, lift, caliper and advance sheets up to 44 in. by 48 in. in size to the registering or feeding station of the press, coater, slitter, shear or



other machine to which it is attached. Tinplate, black iron or other metal sheets may be fed in thicknesses ranging from 38 ga. (approx. 0.0062 in.) to 20 ga. (approx. 0.037 in.). Special features available as optional equipment can extend this range to 18 ga. (approx. 0.050 in.). For further details, please mention PEE No. 189 in your request.

A.C. Unit Type Press Drive

Cline Electric Mfg. Co. has announced an a.c. unit type of newspaper press drive. The Cline Flexitrol



system, includes a pre-wired control cabinet for each press unit and folder, and a master controller, like

(Continued on Page 28)

Need an Oilproof bottom blanket that will not lose gauge ?

Answer: TINGUE FOUNDATION

Available in all gauges

FINE FABRICS LAMINATED WITH NEOPRENE

TINGUE, BROWN & CO.

"BLANKETEERS SINCE 1902"

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1765 Carter Avenue, New York 57, N. Y., CYpress 9-8800

Canadian Sales Agents ROSS WHITEHEAD & CO. LTD., Montreal, Canada

NEW Staude "1000"

BRINGS VERSATILITY TO OHIO BOXBOARD GRAVURE DEPARTMENT

The Ohio Boxboard Co. plant at Rittman, Ohio, has installed a Five Color Staude "1000" Rotogravure Press, a Staude Butt Splicer and an in-line Mercury Die Cutter-Creaser. This combination, equipped with a new web tension control system, is the closest approach to automation in the industry.

Ohio Boxboard knows well the quality, speed and cost advantages of gravure. This new Staude installation with its larger cylinders and design for quick change, adds the big operating advantage of versatility. Frank Kulow, Gravure Supervisor, says of the new Staude, "We are very enthusiastic about the potential of the gravure process and are looking forward to top product quality, uniformity and production."

- √ **Prints webs up to 45" wide with 23" to 46" circumference engraved cylinders—a production bonus of 20% to 25% on every impression.**
- √ **Continuous press operation achieved with Turn Over Roll Stand, Automatic Butt Splicer and Mercury Die Cutter-Creaser.**
- √ **Fast changeover of only 15 minutes per color—each color station is a complete rotogravure printing unit.**
- √ **New web tension system in electric drive assures accurate register.**

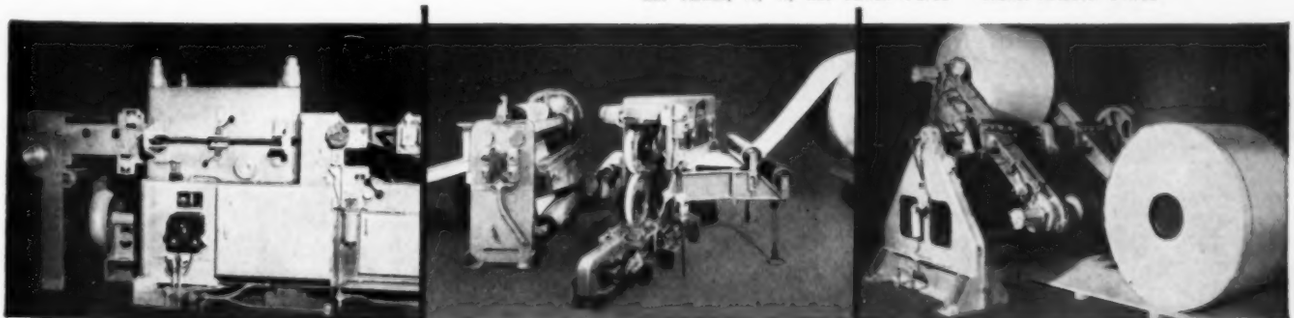
Write for Staude "1000" Bulletin

E. G. Staude MANUFACTURING CO., INC.

Rotogravure Press Division: SPRINGFIELD, VERMONT

Eastern Office: 35 Beechwood Ave. Mt. Vernon, N. Y.; Mt. Vernon 4-3753

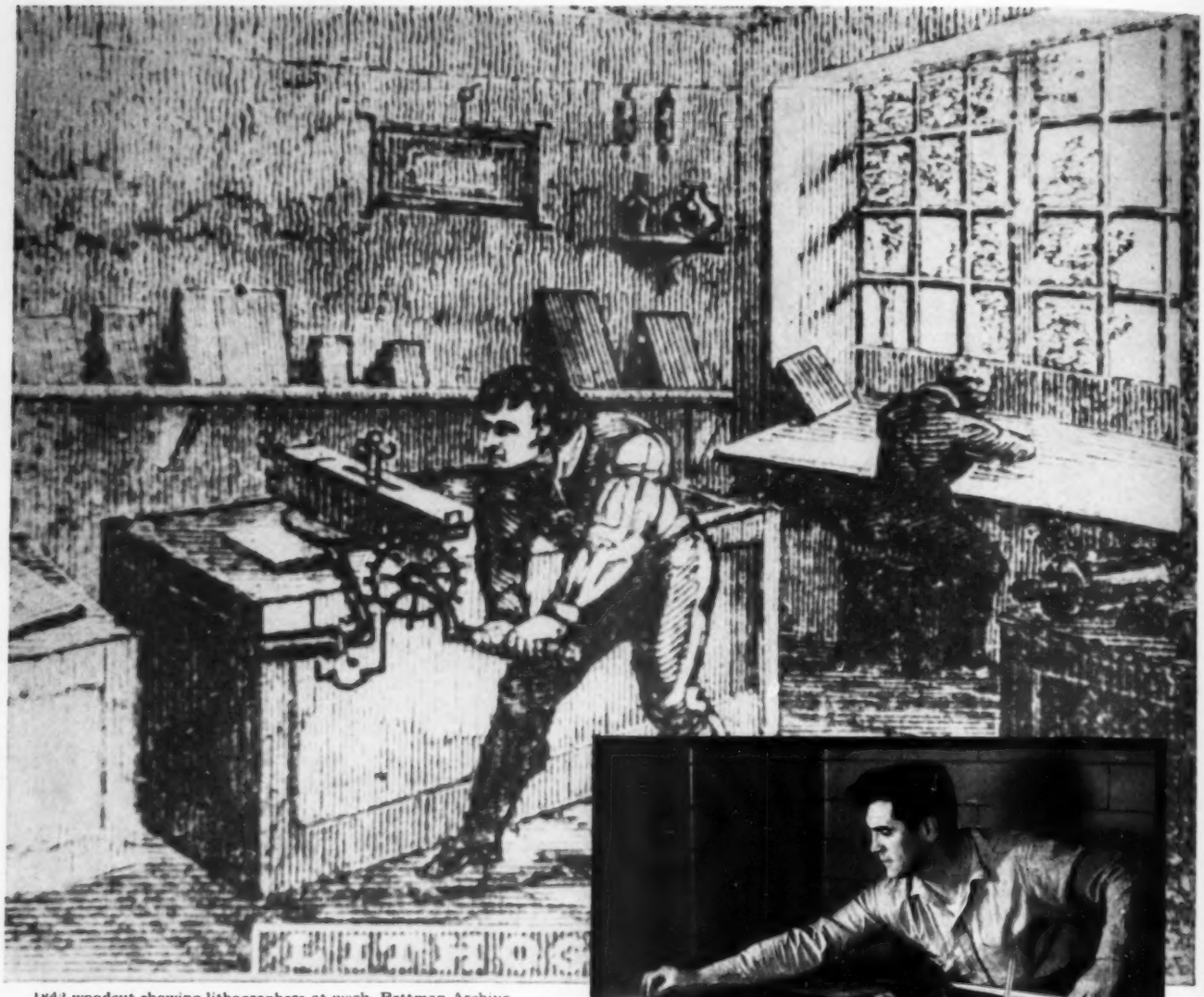
Chicago Office: 82 W. Washington Blvd. Phone: ANdover 3-4980



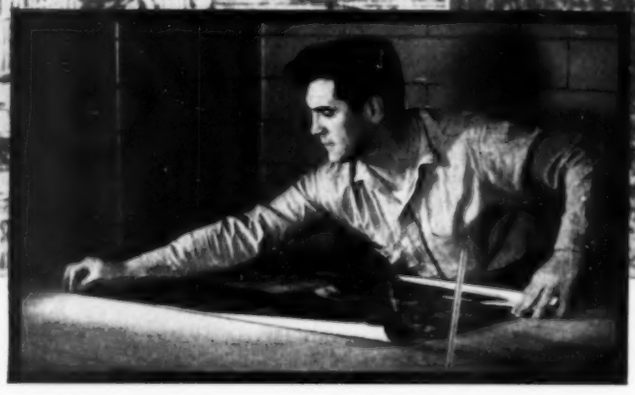
In-line Mercury Die Cutter-Creaser's 200 strokes per minute allows continuous operation.

Butt Splicer automatically splices web of one roll to another without stopping the press.

Turn-Over Roll Stand brings all sizes of roll stock into position for uninterrupted splice



1842 woodcut showing lithographers at work Bettman Archive



in the modern shop, it's

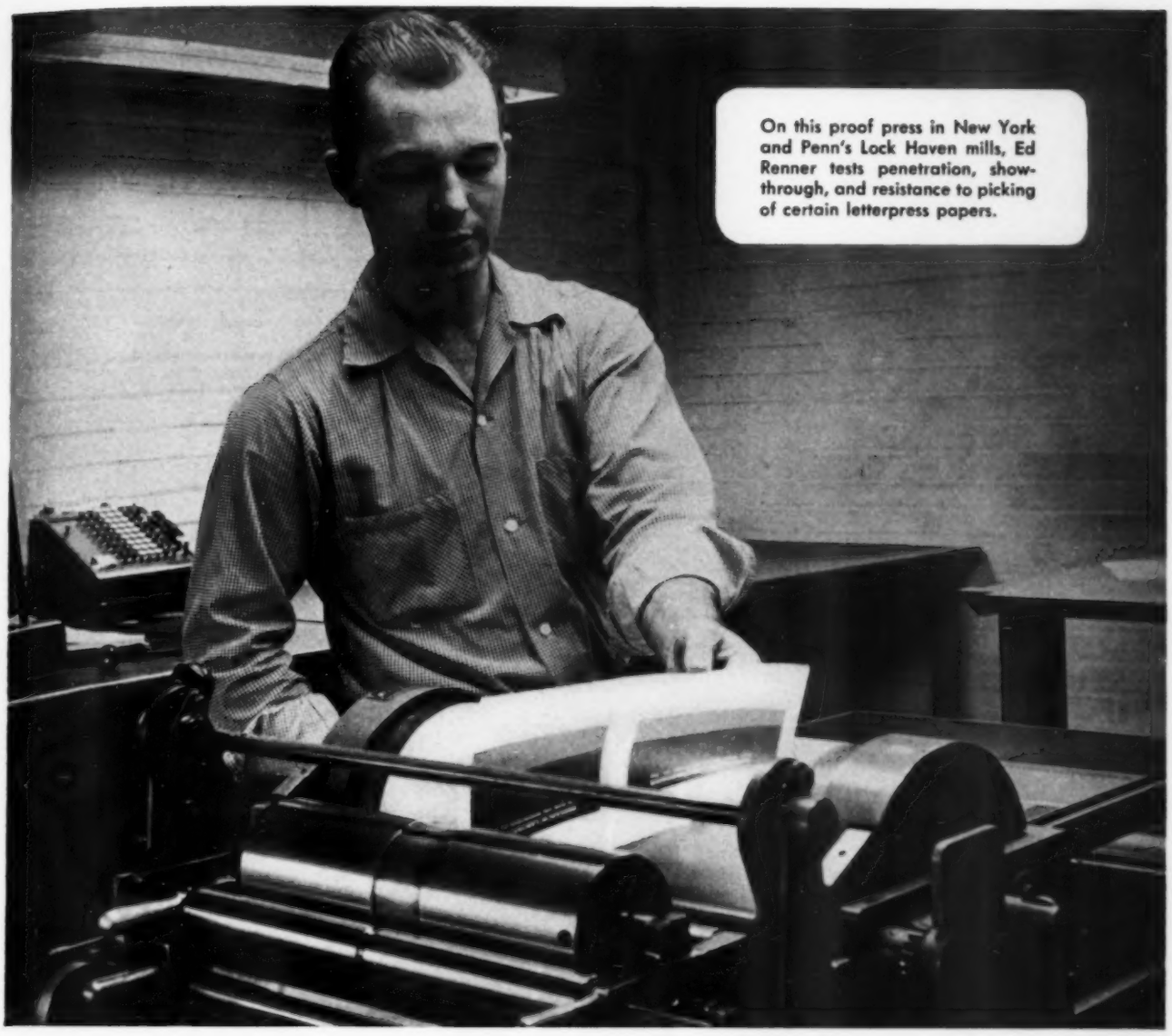
ANSCO
Reprolith Ortho Type B Film

Modern lithographers trim time, expand profits with Ansco Reprolith Ortho Type B Film. Its *high speed* permits shorter exposures in the camera and in printing frames. Its *full orthochromatic sensitivity* permits the use of filters to improve copy rendition, cuts down on hand work on negatives. For high resolving power . . . wide developing latitude . . . fine dot etching qualities . . . steep gradation . . . greater clarity in white areas—you can rely on Ansco Reprolith Ortho Type B.

Save *additional* time with fast-action Ansco Reprodol Developer! Maximum density and contrast . . . long working life. Convenient dry powder mix making 2, 10 and 25 gallons of solution.

ANSCO, Binghamton, New York. A Division of General Aniline & Film Corporation. "*From Research to Reality.*"

ANSCO...graphically the finest since 1842


On this proof press in New York and Penn's Lock Haven mills, Ed Renner tests penetration, show-through, and resistance to picking of certain letterpress papers.

THE PROOF IS IN THE PRINTING

Because hundreds of presses, large and small, consume more than 1,000,000 lbs. of New York and Penn paper every day, *printability* has been a watchword at New York and Penn for decades.

That's why testing is painstakingly careful at every stage. Printability is tested not just on the small proof press shown here. Local full-scale printing facilities are used to prove new papers under actual working conditions, long before they are ready for sale.

New York and Penn paper standards laboratories operate day and night to check opacity, pick, bursting strength, density, brightness, smoothness, and every other critical factor.

The result is a family of great papers that are setting standards for smoothness and printability in plant after plant.

But you be the judge. Write today for the full New York and Penn story, and the name of our nearest distributor. New York & Pennsylvania Co., 230 Park Ave., New York 17, N. Y.

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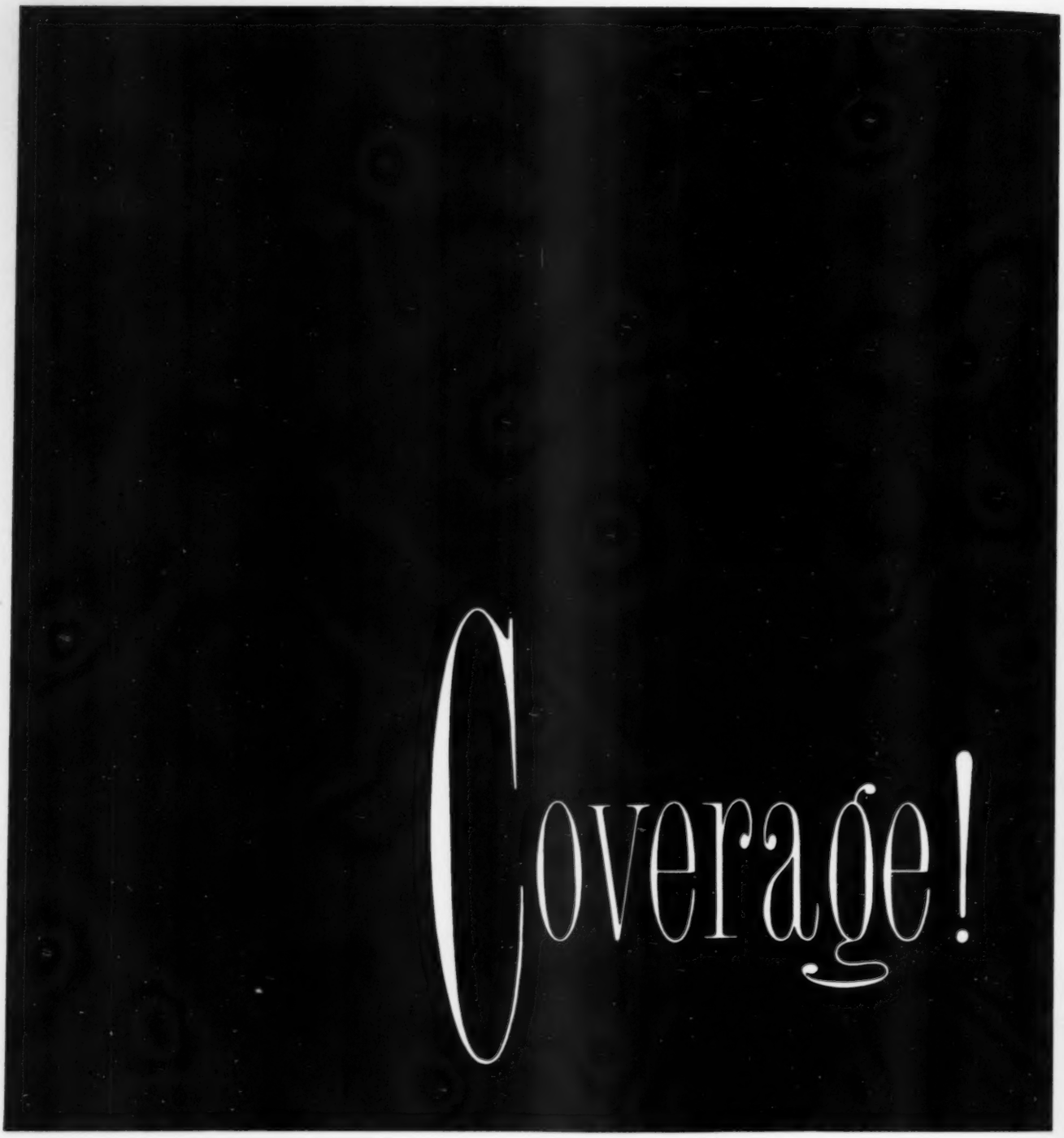

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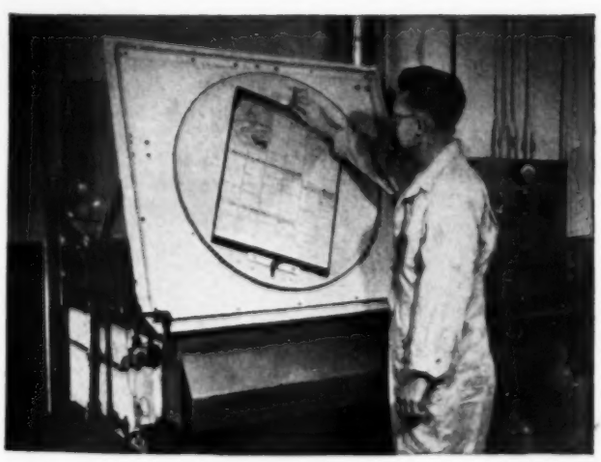
QUALITY NEWS, LETTERPRESS AND OFFSET INKS

When You Put Magnesium Plates on Your Press



The Dow Etch Process improves quality, reduces etching time on magnesium photoengraver's metal. Write Dow, Magnesium Sales Dept. MA398U, for complete information.

your customers get a finer printing job . . . and you get lower make-ready costs plus easier handling!

IF YOU LIKE to have your company name mentioned in the same breath with "quality" when printing is discussed, then magnesium printing and pattern plates have *extra* advantages for you and your customers.

FOR YOUR CUSTOMERS. Magnesium plates yield finer reproduction results when used for either direct or duplicate plate printing. Their superior dimensional stability ensures accurate register on every job.

FOR YOU. Magnesium plates reduce make-ready time to a bare minimum because they're highly accurate in gauge thickness . . . always produce a uniform impression. Then, of course, there's light weight. Magnesium is easier to handle manually. It's easier for your press to handle, too—permits greater safety and less strain at high speeds.

Add the moderate price and ready availability of magnesium to the list, then start putting these advantages to work in your shop. The first step is to contact your local plate maker.

THE DOW CHEMICAL COMPANY, Midland, Michigan.

you can depend on
DOW MAGNESIUM

DOW

Equipment & Supplies

(Continued from Page 22)

the one pictured here, for each folder. The unit controllers house the speed-regulating apparatus, motor protective devices and automatic transfer relays. Master controllers are interconnected with the unit controllers and provide over-all press control with safety interlocks and a wide range of press unit selectivity. Safety interlocks prevent accidental regrouping when the power is on. Panel indicator lights point out trouble spots and furnish a visual check of press make-up. Downtime, due to electrical maintenance or inspection, has been greatly reduced by the drawer-type, plug-in assembly design. When servicing a unit or master controller, the complete drawer assembly slides out and is quickly exchanged with a stand-by assembly or with an associated controller not in use at the time. These unitizing features facilitate addition of controls when required for press expansion. The new drive in the Flexitrol system is said to provide uniform smooth acceleration, deceleration and braking regardless of press combinations, since the braking is especially advantageous for positive web control in red button stops. For further information, please mention PEE No. 187 in your request.

Less Shrinkage Lengthwise with Burgess Mats

Burgess Mats shrink less lengthwise for a given width shrinkage. That makes Ad Managers happy. And Burgess Mats always give you best possible reproduction. That makes everybody happy. So why not do as every Ayer Cup winner for eight straight years has done? Use Burgess Mats!

BURGESS CELLULOSE COMPANY

Manufacturers and Distributors of Burgess Chrome and Supreme Tone-Tex Mats, Freeport, Illinois

Canadian Representative, R. M. Louson & Co., Ltd., Kennedy Road, Agincourt, Ontario

A Laboratory Product BURGESS Chrome MATS

Proof Drier and Cabinet

Petersen and Charles Mfg. Co. recently announced a reproduction proof drier utilizing direct radiant heating. The drier is said to dry dull coated proofs in 15 to 20 sec., and heavy coated or Chrome Kote

proofs in 60 to 90 sec. The PC drier is constructed of steel, and overall measurements (including a companion storage cabinet on which the drier rests) are: 54 in. high, 24¼ in. wide and 20 in. deep. Working height is 48 in. The drier is run on 110 v. a.c. A d.c. drier is also available on request. Supporting the drier is a four shelf steel cabinet which is used to hold proof sheets up to 17 in. by 22 in. For further details, please mention PEE No. 196 in your request.

Automatic Rapid Printer

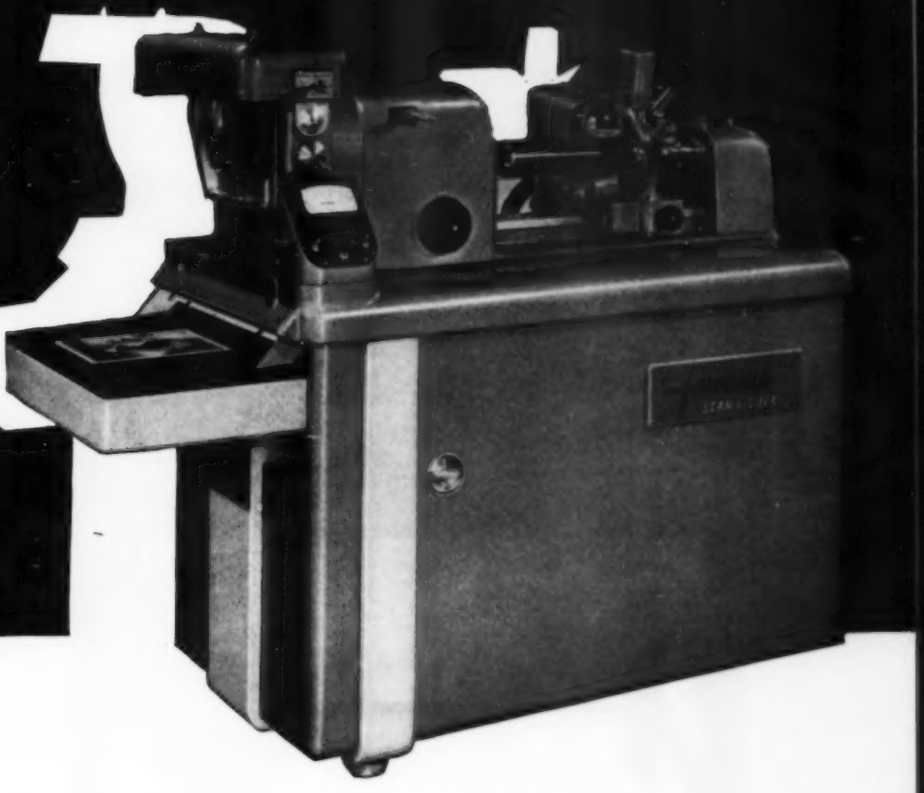
The nuArc Company has announced its Automatic Rapid Printer, a unit with built-in carbon arc lamp with

an automatic strike and feed mechanism. A blower is mounted in the cabinet to eliminate smoke and ash from the arc housing. This model can be used to make printing plates for Multilith, Davidson and other off-

(*Continued on Page 34*)

The SCAN-A-SIZER

is here!



Now in production . . . first deliveries in July

Scan-A-Sizer®, the completely new electronic engraving machine that enlarges, reduces or reproduces same size, is now available. The Scan-A-Sizer enlarges or reduces picture copy in any ratio up to 4¼ times while producing engravings up to 13⅛ x 16½".

Field Tests Completed

The Scan-A-Sizer has successfully demonstrated its reliability and versatility in a series of exhaustive preproduction field tests. For example, reporting to the engraving clinic during the Mid-Atlantic Newspaper Mechanical Conference, Mr. Q. E. Beauge, executive editor of the Williamsport (Pa.) Sun-Gazette, outlined eight months of testing experience as follows:

1. Scan-A-Sizer eliminates copying of photos. (Takes mounted or unmounted art work)
2. Full detail retained even when reducing or enlarging.
3. Both 65- and 85-line on same machine.
4. Offers new possibilities for tonal compensation.

Mr. Beauge summed up his report—**"We can honestly say the test model we have works as reliably as the time-proven Scan-A-Graver models."**

• Write for further details. Address Fairchild Graphic Equipment, Inc., 88-06 Van Wyck Expressway, Jamaica, N. Y., Department 100-36E1.

FAIRCHILD

GRAPHIC EQUIPMENT, Inc.

Presenting...

NEW ELECTRIC

Universal Strip Caster

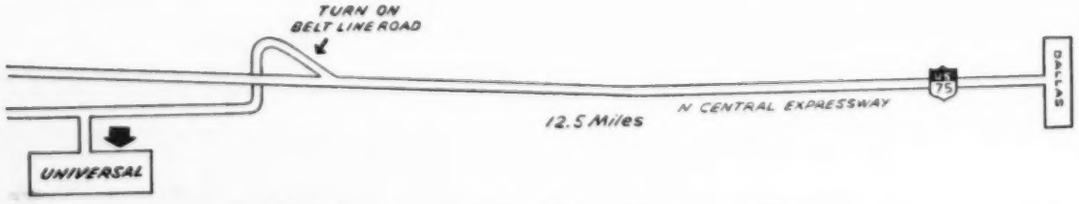
THE NEW ELECTRIC Universal* has been completely redesigned to give thermostatically controlled heating throughout and assures *perfect* casting temperatures. Casts an unequaled 2 pt. leader hairline plus an endless variety of fancy rules and borders in 2 to 18 pt. sizes.

One big money saving feature of the the Universal is its mold and slide matrix design. All 2 pt. faces of rule are run from one 2 pt. mold. You simply change the slide matrix in the mold.

This eliminates the buying of separate molds for extra faces. You need only one rule mold for each strip thickness and the slide matrix for the face.

Just think of these savings. Our new dealers, Harry W. Brintnall Co. and Wolfer Printers Supply Co., will gladly demonstrate the Universal.

*Also available with a gas crucible.



Universal Mono-Tabular Corporation

Manufacturers of the Honig Multiple Broach

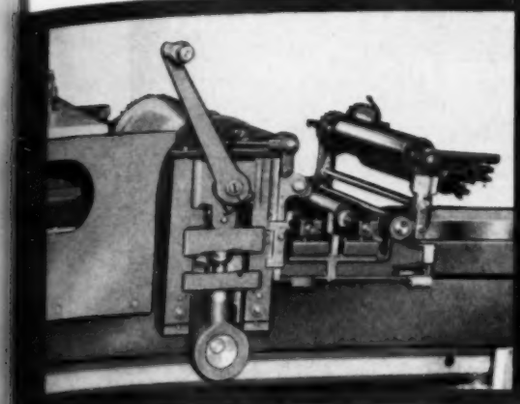
715 N. Central Expressway Richardson, Texas

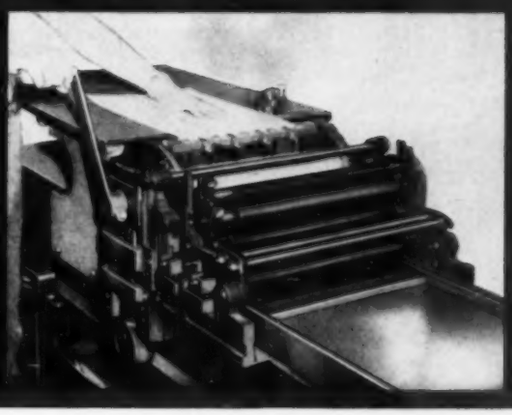
BEFORE YOU BUY ANY PROOF PRESS IN THE 15" by 26" RANGE

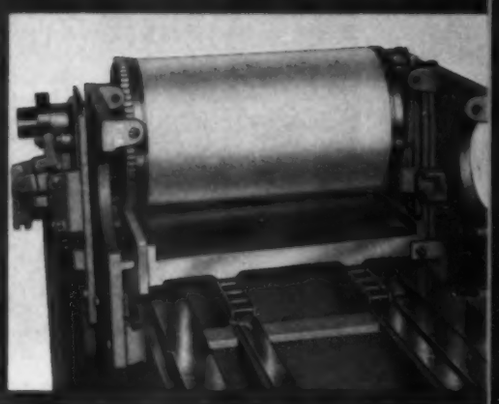
COMPARE CAPACITY . . . BED-SIZE . . . PERFORMANCE AND PRICE . . .

and YOU'LL CHOOSE THE NEW

CHALLENGE GP PROOF PRESS







IMPROVED POWER INKING—has a vibrator roller which oscillates a full 2½ inches to break up and distribute the ink evenly, quickly.

AUTOMATIC GRIPPERS automatically grip the sheet as it comes into position. Auxiliary foot control allows operator to open grippers manually at any point for close register work or for faster release of small sheets.

AUTOMATIC TRIP automatically releases the sheet at the completion of the proofing. Machine can also be tripped at any point of operation with the foot release.

MICRO-REGISTER FRONT GUIDES provide for consistent feeding and accurate register requirements.

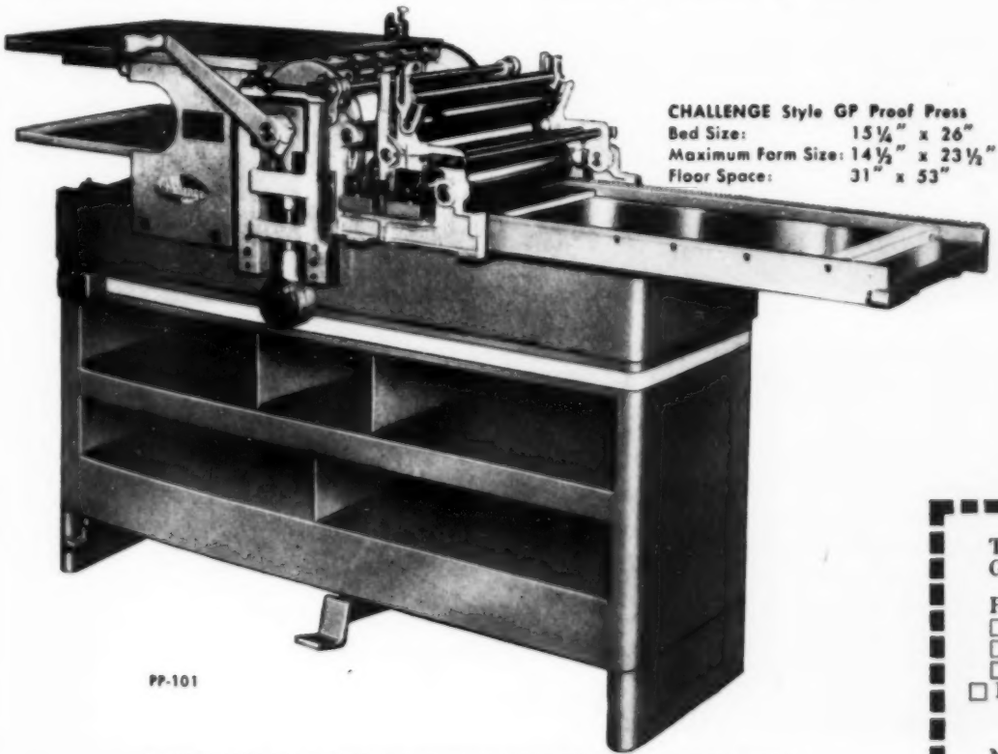
TIP-OUT ROLLERS assure fast, easy wash-ups. One pull of the handle tips the entire roller system separating all rollers as well as putting them into a convenient position for rollers to be washed without removing them from press.

BED GEAR RACK accurately cut from 3 inch solid steel, assures clean reproduction proofs.

CYLINDER PRESS OPERATION
The Challenge "Cylinder Press" system of revolving cylinder and reciprocating bed is the easy natural way to pull a good proof. The operator pulls all proofs standing in one position, without moving back and forth to complete the cycle.

Challenge

TRADE-MARK ®



PP-101

CHALLENGE Style GP Proof Press
Bed Size: 15¼" x 26"
Maximum Form Size: 14½" x 23½"
Floor Space: 31" x 53"

Getting an increased demand for good "repro" proofs for offset or plate-making work? Need a new proof press to replace the old one, or to just expand your facilities? Then here's the press for you—the new Challenge GP Proof Press.

Users tell us it is "unsurpassed" in the quality of proofs it gives. It has operating features that will save you time and money. It has the largest form capacity and heaviest construction of any machine in its size range—yet *actually costs you less to buy.*

THE CHALLENGE MACHINERY COMPANY
Office, Factories, Showroom:
GRAND HAVEN, MICHIGAN
DEALERS IN ALL PRINCIPAL CITIES

The Challenge Machinery Company
Grand Haven, Michigan PEE-8

Please send complete information on:
☐ GP Proof Press ☐ Paper Cutters
☐ Other Proof Presses ☐ Hi-Speed Quoins
☐ Paper Drills
☐ Have your dealer representative call.

NAME _____
POSITION _____
COMPANY _____
ADDRESS _____

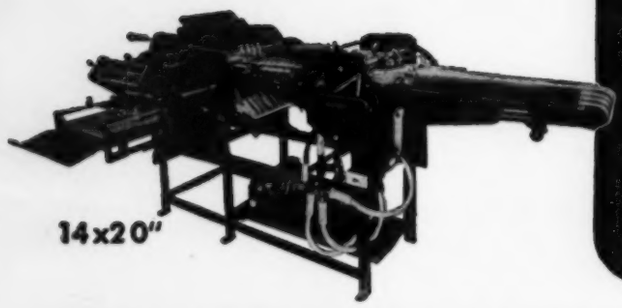
There's a Cleveland for

Cleveland Model, "WW" Folder

With Continuous Suction or Friction Feeder

Handles letters, circulars and folders. Makes one fold, two parallel folds or a combination of parallel and right angle folds. Automatically feeds and folds sheets as large as 14 x 20" and as small as 3 x 4". Two fold plates in parallel section followed by three in right angle section. Rubber rolls optional.

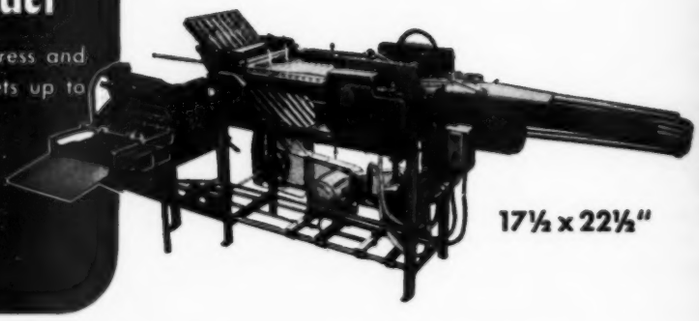
Can be equipped with small signature attachment for folding package inserts and "miniature folds", down to ¾".



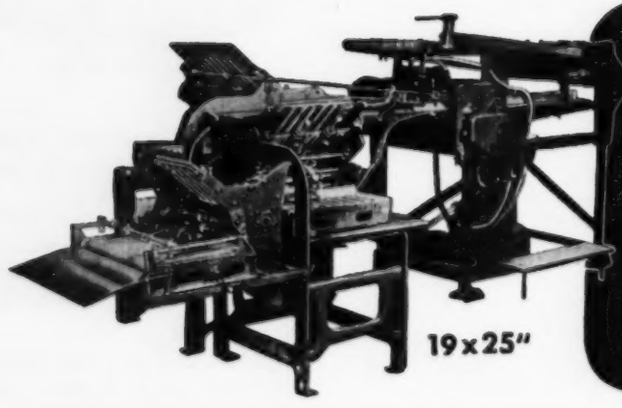
14x20"

Cleveland Model "AT" Folder

Efficiently handles the product of 17½ x 22½ letterpress and offset presses. Folds accurately, at high speeds, sheets up to 18 x 24" in wide variety of impositions. Four fold plates in parallel and four in the right angle section provide for flexibility of product. Adjustment is simple, construction sturdy. Small signature attachment available for folds as small as ¾" width.



17½ x 22½"



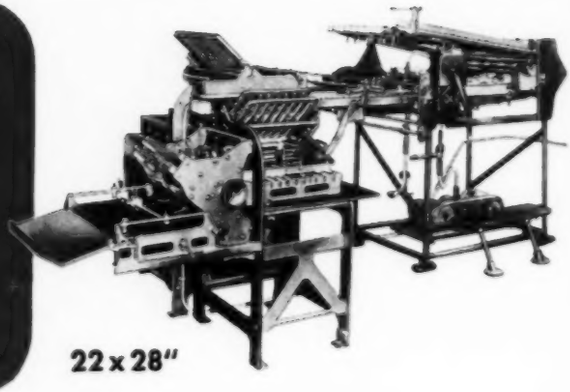
19x25"

Cleveland Model "OS" Folder

Ideal for the small and medium sized job printing plants. Handles maximum sheet size of 19 x 25" and minimum of 4 x 6". Three folding sections of parallel and right angle folds. Folds 16 page signatures in three right angles in page sizes from 6¼ x 9¼" maximum to 2½ x 3" minimum.

Cleveland Model "OO" Folder

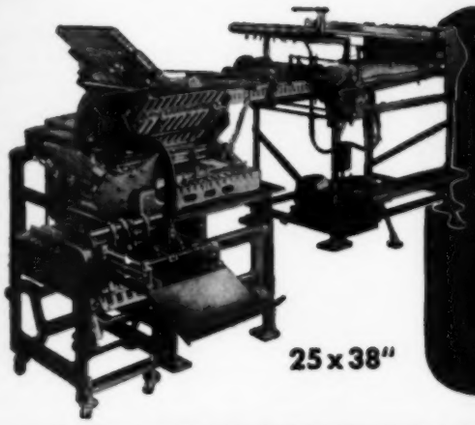
Popular model for the medium sized popular printer or lithographer. In its size range are included all folding combinations of parallel and right angle folds. The model "OO" handles sheets for parallel folds up to 22 x 34" and right angle folds up to 22 x 28" with a minimum sheet size down to 4 x 6".



22x28"

every folding requirement..!

DEXTER

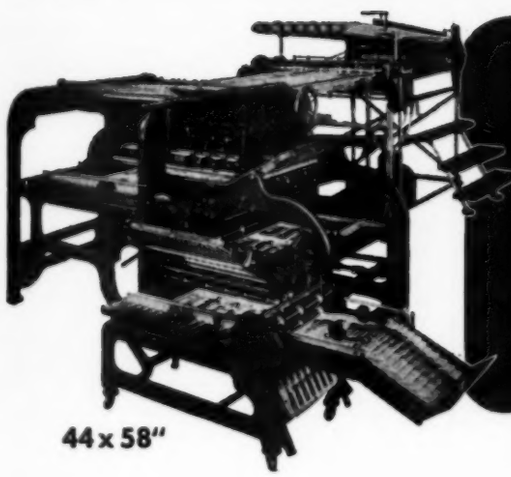


Cleveland Model "MS" Folder

Serves medium sized printing plants with volume work where trade binderies are not readily available. Maximum sheet size 25 x 38" for both right angle and parallel folding and for work and turn up to 38 x 50". Its range includes all types of folds on 25 x 38" sheet including gang work and right angle multiple signatures. Uses minimum of floor space and its versatility gives it an unusually high earning power.

Cleveland Model "MM" Folder

This model Cleveland can make one to four parallel folds in sheet sizes from a maximum of 28 x 58" down to 5 x 7" and one to four right angle folds from a maximum of 28 x 44" down to 8 x 8" plus all practical combinations of parallel and right angles folds. It can also handle gang work and right angle multiple signatures. Profitable for printers and lithographers as well as binders.



Cleveland Model "KK" Folder

Can handle sheets up to 44 x 64" in the parallel sections and 44 x 58" in the right angle with a minimum of 12 x 16". The KK will make one to four parallel or right angle folds plus all practical combinations of parallel and right angle folds within its range. A map folding attachment is available.

ILLUSTRATED CIRCULARS ARE AVAILABLE FOR ANY OF THE ABOVE MACHINES

DEXTER FOLDER COMPANY

General Sales Office

330 West 42nd Street New York 36, N. Y.

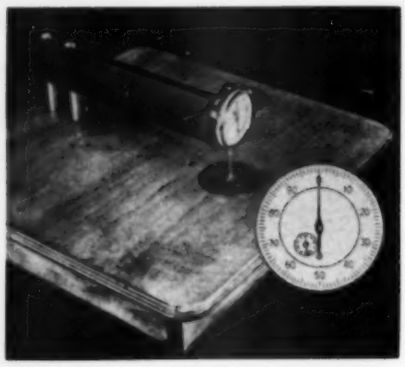
Equipment & Supplies

(Continued from Page 28)

set presses up to 17½ in. by 22½ in. size. It requires comparatively little floor space and gives off no harmful odors. The rays of arc cannot escape from the cabinet as the lid is always closed when the unit is in operation. It comes equipped with a vacuum release valve so the lid can be lifted instantly upon completion of the plate. It can be connected to any 110 v.a.c. line. For more information, please mention PEE No. 204 in your request.

Plate Thickness Gauge

The Eva-Gauge for gauging large and small size cuts, rubber and plastic plates, matrices, offset blankets, paper stock, card stock, foundry type, linecomposing and Ludlow slugs and rule has been announced by American Evatype Corp. The Micrometer dial comparator features a 10 in. throat and 3 in. round anvil bolted to steel foundation under 18 in. by 18 in. hard maple table. Readings to one inch are given with the gauge. For further details, please mention PEE No. 193 in your request.

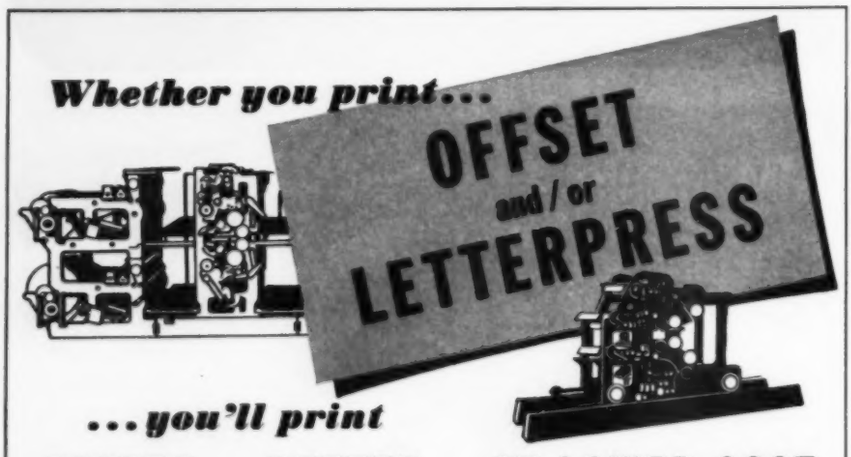


Film for ProType Machines

A film with the working qualities of ProPaper is available for use with ProType machines, it was announced by Mergenthaler Linotype Co. Mergenthaler and its subsidiary, Davidson Corporation, are exclusive distributors of ProType. The ProFilm can be handled and developed under normal office illumination. It is available in two sizes: 8½ in. by 50 ft., and 17 in. by 25 ft. Also available are two liquid chemicals; ProType Developer and ProType Rapid Fixer. Supplied in 8 oz. and 1 qt. size bottles, these are concentrated mixtures that should be diluted with tap water. For further details, please mention PEE No. 188 in your request.

Newspaper Press Roller

Development of a flame resistant synthetic rubber roller for all standard high speed newspaper presses was announced recently by the Dayton Rubber Co. The roller was designed for metropolitan dailies. The roller is said to have a smooth surface finish and good resilience. It is also claimed by the manufacturer that the roller has good resistance to column scoring which reduces the amount of regrinding. The roller also, according to manufacturer, maintains a uniform diameter and does not swell excessively. For further details, please mention PEE No. 190 in your request.



FASTER • BETTER • AT LOWER COST

with a HESS & BARKER

WEB-FED OFFSET PRESS

1 to 4 colors

•

800′ per minute

•

All roller adjustments quickly and easily made

•

Running register control

•

Print coated stock; book papers; newsprint

•

Accurate ink and water control at ALL times

•

Use conventional offset, zinc, aluminum, or "D.I." plates

WEB-FED PERFECTING LETTERPRESS

1 to 6 colors

•

800′ per minute

•

Better accessibility *greatly* reduces makeready time

•

100% hairline register at high or low speeds

•

Print coated or uncoated stock

•

Perfect ink distribution—ALWAYS

•

Use stereotypes, electrotypes, or rubber plates

WIRE, CALL, OR WRITE FOR FREE DEMONSTRATION OR LITERATURE ON EITHER OF THESE OUTSTANDING PRESSES

HESS & BARKER

212-22 SOUTH DARIEN ST., PHILADELPHIA 7, PA.

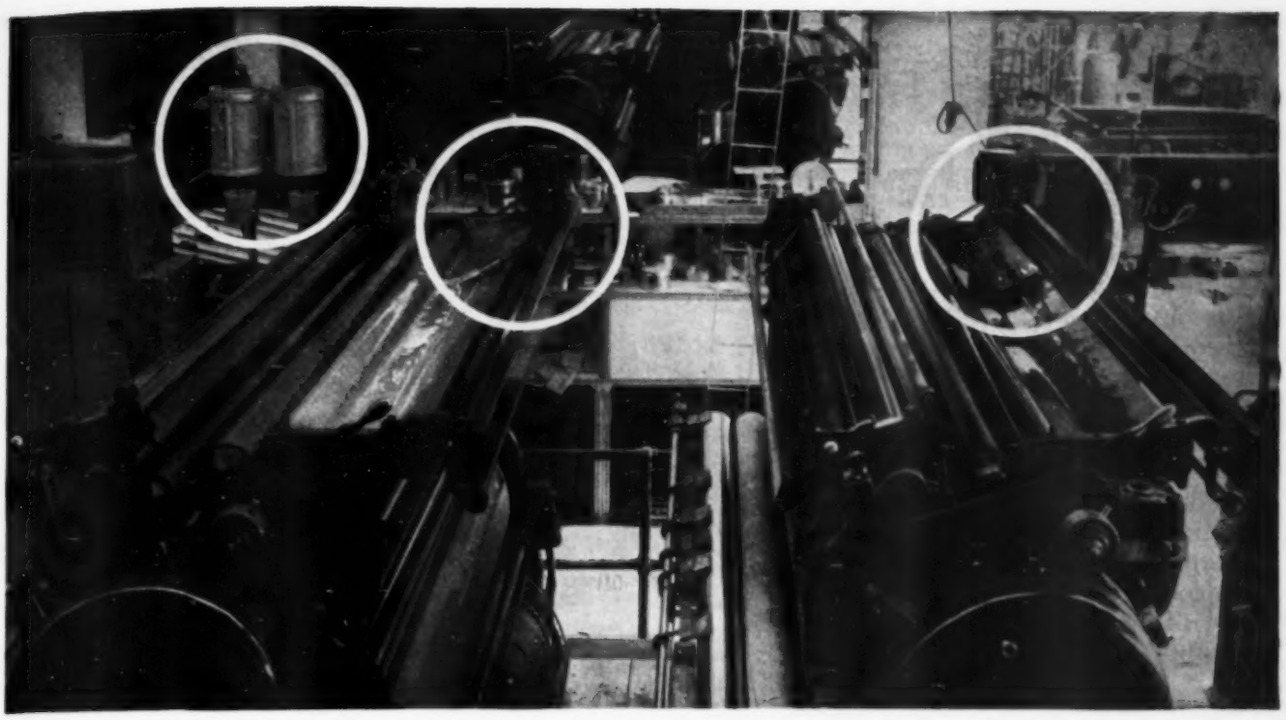
WAlnut 3-0248

Ilford Opens Photo Materials Subsidiary

Ilford, Inc., an American subsidiary of the British photographic firm of Ilford, Ltd., has opened offices and warehouse facilities at 37 W. 65th St., New York, N. Y. H. S. Tasker, president of Ilford, Inc., announced that the new firm will serve as the focal sales organization in the U. S., will hold stocks for inventory, and will provide dealer and technical service to consumers.

The company's product line includes X-ray films and intensifying screens; plates and film for the Graphic Arts industry; films, plates and papers for commercial and industrial photographers, and the Ilford line of amateur materials. In the Graphic Arts field, Ilford offers plates suitable for making copy and screen negatives.

Tasker also announced distribution and dealership machinery for the new American firm.



Here's a pair of Harris 52½ x 77 LTY 2-color offset presses equipped for ink and water control. On the press in the foreground, you see Baldwin Ink Agitators in the two ink fountains. Baldwin Water Levels on second press are at upper left. Baldwin equipment is identical on both presses—they have Baldwin Press Washers, of course.

How to control ink and water problems

A leading lithographer gave this as his "secret" of consistent high quality: "Make sure you keep the correct balance of ink and water."

That's excellent advice! And you'll find it easy to follow when your presses are equipped with both Baldwin® Ink Fountain Agitators and Baldwin® Water Levels. Here's why:

Baldwin Ink Fountain Agitators keep ink thoroughly mixed while it is *force-fed* to the fountain rollers. You use less ink to start with—just enough for the job at hand. And the separate agitator motor-drive means ink can be kept mixed during press shutdowns so there is no ink-wasting skin to be fished out of the fountain and thrown away. What's more, ink-mill action assures quick starts because ink-flow always is uniform. All this adds up to better control over color and quality with substantial savings in time, money, and ink on any size press *whether your runs are long or short!*

There are *two* Baldwin Ink Fountain Agitators*: Style B for large presses; and the new Style C of compact, close-coupled design with special advantages for you owners of smaller presses.

Baldwin Water Levels maintain constant fountain-solution level *automatically* . . . stabilize fountain settings . . . assure just the right balance of ink and water. What's more, with a Baldwin Water Level equipped with automatic non-spill valve you eliminate sheet-spoilage caused by water-spills when the fountain is filled. And consider these other important advantages: The non-breakable polyethylene reservoir *keeps* the water free of airborne contaminants. It cannot rust or corrode to set up chemical reactions in the fountain solution. It gives you an instant check on water-level at a glance. Yes, with a Baldwin Water Level, you are sure of a constant, *controlled* supply of fresh solution in your fountain.

Remember! There's a Baldwin Ink Fountain Agitator and Baldwin Water Level that's just right for *your* presses. Send for illustrated literature today giving the make, model, and size of your equipment.

*Style B licensed under Patent No. 2,234,754; patents applied for on Style C.

WILLIAM GEGENHEIMER CO., INC. 80 Roebling Street Brooklyn 11, New York

Manufacturers of Baldwin Ink Fountain Agitators • Baldwin Press Washers • Baldwin Water Stops • Baldwin Water Levels

Graphic Arts Equipment and Supplies

Literature for the Asking

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please ask for the pieces selected by number and send your request to Literature Dept., *Printing Equipment Engineer,* 1276 West Third St., Cleveland 13, Ohio.

Composing Room

COPYFITTING GUIDE

Intertype Corporation recently issued a new edition of its booklet entitled *Intertype Ready Reckoner* which is a guide for copyfitting of all Intertype linecasting machine faces and other type faces where the alphabet length is known. With the Intertype guide accurate copyfitting to any layout is possible or determination of how many pages a given manuscript will make in any selected type face, in any width setting desired. Also included is a page of commonly used proofreaders' marks. For a copy of the 28 page booklet, please mention PEE No. 198L in your request.

COMPOSING ROOM EQUIPMENT

Foster Manufacturing Co. has published an eight page bulletin descriptive of its service in supplying composing room custom tailored equipment from a column galley to makeup stones. Included in the bulletin are illustrations of Foster ad frames in the composing room of the Washington (D. C.) *Post* and the Boston *Herald Traveler.* Illustrations also show how Foster planned equipment layout for the two news papers. For a copy, please mention PEE No. 199L in your request.

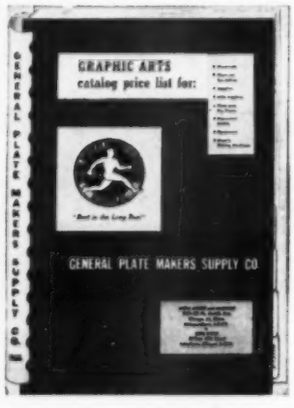
Platemaking

MAGENTA CONTACT SCREEN

A revised and simplified edition of the booklet, *How to Use the Kodak Magenta Contact Screen,* has been announced by Eastman Kodak Co. The 12 page, 8½ in. by 5⅝ in. booklet, is punched for insertion in the Kodak Graphic Arts Handbook. Sections of the publication include methods of making halftone screen negatives, making halftone positives, making a vacuum film holder, and care of the contact screen. Charts on both the available sizes and rulings of the Magenta Contact Screen for photolithography and photoengraving, and the extension of tone scale by using controlled flash, are included. Information on positioning the screen and negative, the controlled flash method, determining correct exposure, setting up a flashing lamp, highlighting methods, controlled agitation, and development is included. For a copy, please mention PEE No. 200L in your request.

CATALOG PRICE LIST

An enlarged combination catalog-price list showing Graphic Arts equipment and supplies



has been compiled by General Plate Makers Supply Co. for photoengravers, offset platemakers, and others. In each of the eight sections is provided a breakdown of chemicals, offset supplies, general supplies, films and dry plates, engravers' metal, electric etching machines and other equipment. Illustrations, reading matter and an alphabetical index are included in the catalog. For a copy, please mention PEE No. 202L in your request.

FLEXOGRAPHIC PATTERN PLATES

Oshkosh Engraving Co. has published a two page, 8½ in. by 11 in. bulletin on flexographic pattern plates for flexographic packaging applications. More general than technically detailed, the copy in the bulletin discusses the advantages of magnesium pattern plates. Please mention PEE No. 201L in your request for a copy.

TYPE DIRECTORY

A reference folder, listing the selection of types available at Advertising Composition, Inc., has been released. On the back cover, the Tailored Words lettering service is described. This service incorporates 260 styles of lettering. Tailored Words are processed on photographic paper for reproduction. Ten pages of the folder are devoted to a list of type faces and sizes available. For a copy, please mention PEE No. 203L in your request.

Pressroom

FLEXITROL PRESS DRIVE

The Flexitrol a.c. unit type newspaper press drive is fully described in a 12 page, 8½ in. by 11 in., four color booklet, published by Cline Electric Mfg. Co. Photographs, diagrams, and drawings are used liberally to help tell the story of this new press drive. Words are kept to a minimum, yet the story is well told. Please mention PEE No. 204L in your request for a copy.

RUBBER OFFSET BLANKETS

A booklet has been issued by the Printers' Supplies Department of the Goodyear Tire & Rubber Co. to illustrate and describe best pressroom practices for reproduction with rubber offset blankets. The five steps mentioned are: Preparing the blanket for the press, underpacking, cleaning, adjustment of press and stretching on the press. Also included is a description of the Goodyear blanket. For a copy, please mention PEE No. 205L in your request.

SYNTHETIC RUBBER ROLLERS

A two page bulletin released by Ideal Roller & Mfg. Co. is descriptive of the company's Synthox synthetic rubber rollers. Working features of the rollers are included in the two color folder. Synthox rollers are said to operate cool, to maintain their settings and to hold their speed on hot days. For a copy, please mention PEE No. 206L in your request.

AUTOMATIC PLATEN PRESS

The 10 in. by 15 in. Original Heidelberg Platen Press for printing, die cutting and for embossing is described in a four page folder released by Heidelberg Eastern, Inc. Listed in the folder are specifications, inking apparatus, standard equipment and Heidelberg prices, terms and deliveries. A full page illustration of the press is also included. Six features of the press listed are: Rotary gripper system, automatic washup, impression control, two-up attachment, hairline register and 14 in. feed and delivery piles. For a copy, please mention PEE No. 207L in your request.

USES OF ROTOGRAVURE INKS

A 38 page booklet in which are discussed properties, types and printing techniques for rotogravure inks is offered by Champlain Company. The booklet is based on a report compiled by the Packaging Technical Committee of the Gravure Technical Assoc. Chapters on ink films, types of gravure inks and wet ink tests are included along with different aspects of using gravure ink. Separate chapters are used to present solutions to common printing problems. A sample form for maintaining a record of different inks used for different printing jobs, and a typical Gravure Cylinder Production Order form are illustrated. Physical constants of commonly used gravure solvents are listed. A glossary of terms used in reference to gravure inks is also included. For a copy, please mention PEE No. 180L in your request.

(Continued on Page 93)

Literature Request Coupon

After you have selected the literature described in these pages which you would like to have sent to you, please jot down the identification numbers on this coupon and mail to

PRINTING EQUIPMENT *Engineer*
1276 West Third St., Cleveland 13, Ohio

Literature Number (s) _____

_____

Your Name and Title _____

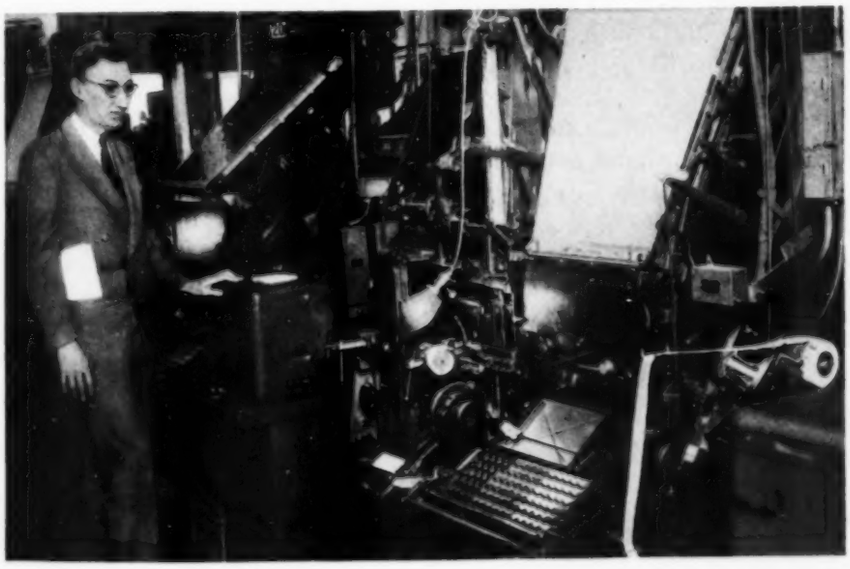
Company Name _____

Street Address _____

City _____ Zone _____ State _____

"TTS helps America's oldest newspaper cast 30,000 lines of type per day!"

The Perforator room at the Hartford Courant is located next to the editorial department. Stewart W. Beckett is shown here observing two of the Courant's nine TTS Perforators in action. Fourteen Perforator operators punch tape at an average rate of 410 lines per hour, per operator over a seven-hour shift.



Here are two of the Courant's eight line-casting machines equipped with TTS Reperforators and Operating Units which produce a continuous flow of type automatically to help the newspaper cast 30,000 lines of type per day.

says Stewart W. Beckett, production manager, The Hartford Courant.

The Hartford Courant, America's oldest newspaper of continuous publication, is a seven-day morning paper. They began their Teletypesetter operation in 1950 with five Perforators and four Operating Units. The Operating Units were installed on three Linotypes and an Intertype.

Stewart W. Beckett, production manager, writes: "Our TTS system proved so successful that we are now operating nine Perforators and eight Operating Units. We run our four new Linotype Comets and high speed Intertype at ten lines. Three older machines run at eight lines.

"Before TTS, we averaged 1500 lines per day for each manual operator. Now we average 410 lines per hour per Perforator operator over a seven-hour shift. We find experienced typists make excellent Perforator operators after no more than 3 months' training.

"With TTS, we handle all classes of composition from half-measure to 18 ems, game scores, classified ads, etc. Beside local perforation, we carry full A.P. TTS wire tape circuit and New York Stock Exchange and American Stock Exchange reports. We average casting 30,000 lines per day.

"At first, employees were skeptical about TTS. With management assurance that it was being installed to meet anticipated growth and no one was going to be displaced, TTS was accepted as a production tool. It soon became a very *welcome* part of our operation. Without TTS, we would not have been able to keep pace with our paper's rapid expansion without having made a capital investment in additional typesetting machines, to say nothing of trying to hire more manual operators in a tight labor market.

"We look on Teletypesetter as an important production advancement that has materially helped us to meet the demand for more type—efficiently and economically."

• • • •

For detailed information on how TTS can substantially reduce your composing room costs write: Teletypesetter Corp., Dept. PEB, 2752 North Clybourn Ave., Chicago 14, Ill.

TELETYPESETTER

how ATF's widest choice of presses and finance plans helps you make profits

BEFORE YOU BUY—
consult ATF's complete line... whatever your printing needs.

Get the facts. **Use the checklist below to indicate the equipment in which you are interested. Use coupon on opposite page to get more detailed information.**

OFFSET
Web-fed Presses
- ☐ Publication Presses
- ☐ Commercial Job Presses
- ☐ Business Forms Presses
- ☐ Specialty Presses

Sheet-fed Presses
- ☐ Single Color, up to 42" x 65"
- ☐ Two Color, up to 48" x 65"
- ☐ Perfecting, 38" x 53"

LETTERPRESS
Web-fed Presses
- ☐ Publication Presses
- ☐ Rubber Plate Presses

Sheet-fed Presses
- ☐ Cylinder Presses, up to 25" x 37"
- ☐ Proof Presses

GRAVURE
Web-fed Presses
- ☐ Publication Presses
- ☐ Packaging Presses
- ☐ Specialty Presses

Sheet-fed Presses
- ☐ Two to Six Colors, 20½" x 28½"
- ☐ Two to Six Colors, 35" x 50"
- ☐ Proof Presses

FLEXOGRAPHIC
Roll to Sheet Presses
- ☐ Four Colors, 11" x 17"
- ☐ Four Colors, 18" x 22"
- ☐ Six Colors, 18" x 26"
- ☐ Other sizes to suit

Roll to Roll Presses
- ☐ Three or Six Colors, widths: 12½", 17", or 20½"
- ☐ Three to Six Colors, widths: 26½", 31½", 37", or 43"

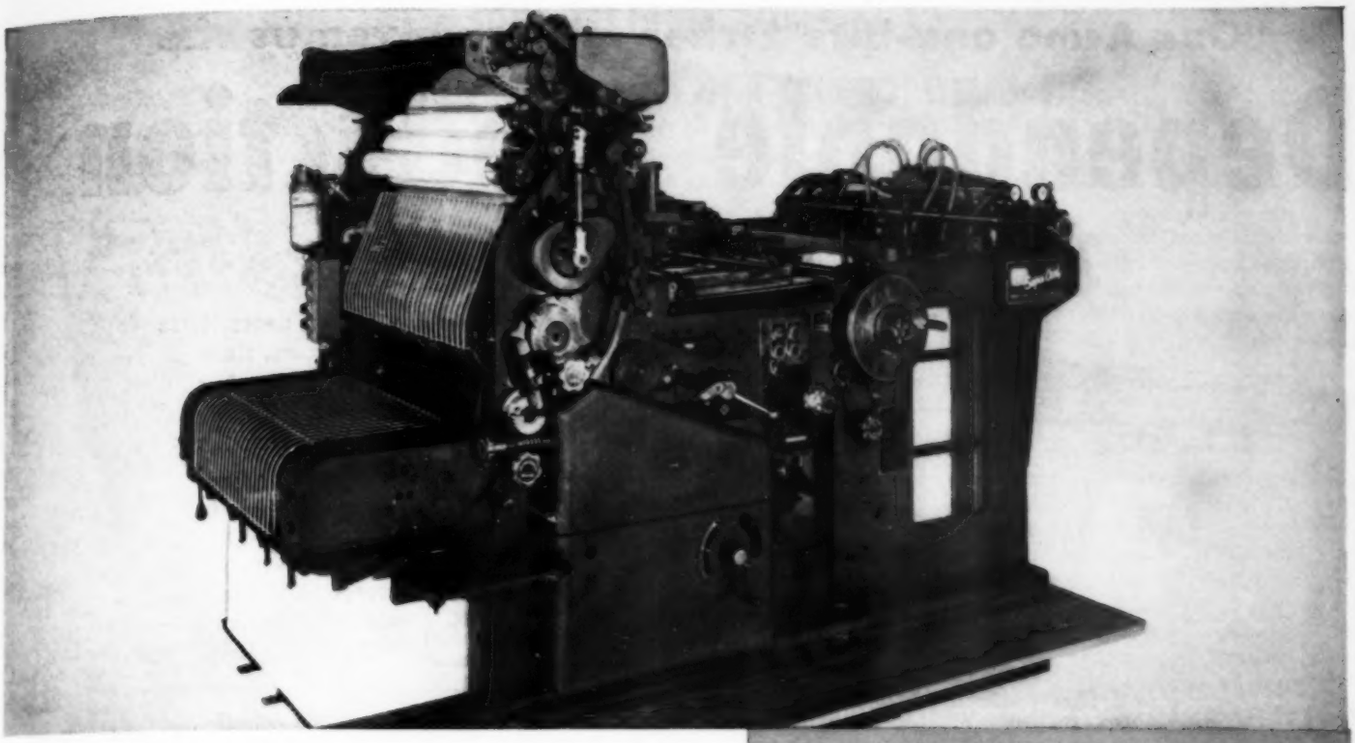
How many hundreds or thousands of dollars are *you* losing this year because of obsolete equipment? You can put an end to this "No. 1 profit-stealer"—and start right now.

"But," you ask, "can I afford the equipment I need?" ATF answers with the most liberal, lowest-cost finance plan in the industry. Good trade-in allowances, low monthly payments with simple interest on the unpaid balance make "pay-as-you-earn" purchasing possible. Or you can *lease* ATF equipment, if you prefer. Ask your ATF Representative for full details on either plan.

ATF's Printing Progress Plan offers you the *right equipment* from the most complete line available in the graphic arts industry. *Only ATF* offers sheet-fed and web-fed offset presses, sheet-fed and web-fed letterpresses, sheet-fed and web-fed gravure presses, and web-fed flexographic presses—the right press and the right process for nearly every printing requirement.

ATF Service helps you keep your equipment producing profits. A call to Western Union "Operator 25" brings prompt action, should an emergency arise. ATF Spare Parts Kits provide low-cost replacements, on hand when you need them, for parts normally subject to wear (tapes, sucker tips, belts, etc.).

ATF **better—more profitable printing from the most**



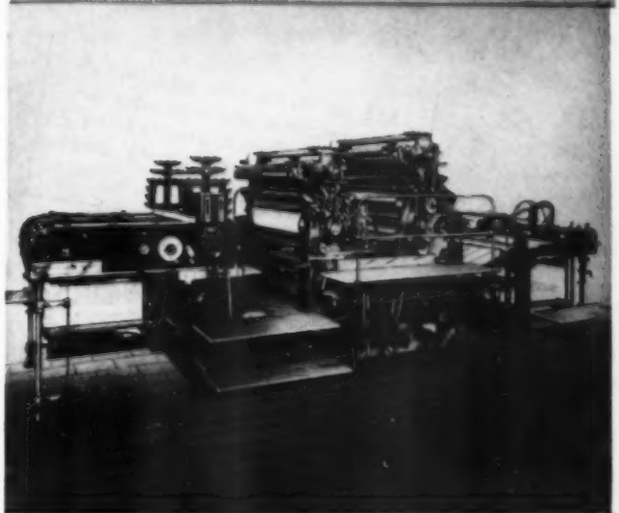
The productive new ATF Super Chief builds profits by combining close register with high printing speeds.

put the most productive sheet-fed offset presses in your shop . . . *right now!*

The ATF Super Chief is the *pressman's press* of the 23″x30″ size range. Every feature has been designed to give the operator swift, sure control of stock, ink, water and speed. He can switch from sheet-feed to stream-feed, or back again, in minutes. He can reload the feeder while the press is running. The SUPER CHIEF is easy to operate . . . and easy to own. Get the story from your ATF Representative today.

Other ATF Chief presses are available in these sizes: 14″x20″, 17½″x22½″, 17¾″x24½″, and 23″x29″.

Need a larger offset press? ATF-MANN offers a complete line of single-color presses from 23″x36″ to 42″x65″—seven different models—and two-color presses from 25½″x38″ to 48¼″x65″—six models. The ATF-MANN Perfector, 38″x53½″, has established an enviable reputation for profitable production of jobs printed both sides at once.



ATF-MANN L-236, 25⅛″x38″ two-color offset press produces high quality lithography at speeds up to 5500 impressions per hour.

complete line of equipment

ATF

American Type Founders
200 Elmora Avenue
Elizabeth, New Jersey

I'm interested in more information about ATF's_____

_____

Size:_____ Colors:_____

Name_____ Title_____

Company_____

Street and Number_____

City_____ Zone____ State_____

PEE-8

4105

"Our Acme one-bite Etcher . . . has given us the

Dependable Production

necessary for volume operation"

"Large scale engraving production necessitates careful control of three factors: costs, time and quality. Our Acme one-bite Etcher has *not only* cut costs and saved time — while maintaining quality — but has given us the *dependable production necessary for volume operation.*" This statement by Carl Clutter, Superintendent of the Niagara Photo Engraving Co., Buffalo, N.Y., sums up the Acme one-bite Etcher story.

The Acme one-bite Etcher *saves time* — halftones from negative to finished plate, etched in just 5 minutes, line and combination in only 15-20.

The Acme one-bite Etcher *cuts costs* — by eliminating costly time-consuming 4 way powdering, heating, cooling and re-etching. Routing is virtually eliminated.

The Acme one-bite Etcher *assures quality* — halftones etch to .006" automatically, line and combination to .040". Side walls pyramid and are coated with a resist that prevents *any* undercutting.

SEE an Acme one-bite Etcher in operation. Write or wire for demonstration in your locality. Write for specifications and complete details.

HERE'S HOW IT WORKS

The Acme one-bite Etching process is simple. The negative is printed on an Acme Z-M (zinc coated magnesium) plate in the conventional manner. Unexposed zinc is removed in two minutes with a dilute solution of nitric acid. The prepared plate is then fastened to the lid of the Acme one-bite Etcher. In five to twenty minutes the completed plate is ready to be removed and cleaned. That's all there is to it.

The combination plate used in this advertisement was etched by an Acme one-bite Etcher in little more than twice the time it took you to read this advertisement.

And it's dependable for volume production, day after day!

The Cleveland Press

"Speed is essential to meet our deadlines now that we have increased press capacity from 72 to 96 pages. Our Acme 'One-Bite' Etcher gives us both quality and speed on our entire engraving production." William F. Alexander, Superintendent, Engraving Department, The Cleveland Press.

ACME TELECTRONIX

DIVISION OF NEA SERVICE, INC.

1200 WEST THIRD STREET • CLEVELAND 13, OHIO

For Busy Rubber and Plastic Plate Molders

HOW TO CHOOSE A PLATE MOLDING PRESS

*(Reading time 3 minutes)**

ONLY in the rubber and plastic plate making processes is a single piece of equipment so highly responsible for the accuracy, life, and general value of the finished plates as is the molding and vulcanizing press. The molding press produces both the matrices and the plates. Since the plates cannot be hand finished to the same extent as electrotypes and stereotypes, it is essential that they be molded as perfectly as possible. These very facts account for the production simplicity and relatively low investment cost of a rubber or plastic plate-making department. But of even greater importance, they emphasize the necessity of careful press selection.

Press accuracy

Press accuracy is obviously the most important feature of any molding equipment. Accuracy alone, however, cannot be the only consideration. Other important features to be carefully investigated include: platen size, tonnage capacity in relation to size, uniformity of platen heating, choice of steam or electric heat, maximum speeds and controls for press closure and pressure build-up, operating and maintenance costs, and performance under continuous heavy-duty service.

How can the accuracy of a molding press and its ability to maintain its accuracy be known in advance? A large diameter ram approaching or equalling the dimension of the platen is extremely desirable in such equipment. With a ram underlaying nearly the entire working area, there is little or no chance for platen deflection. The importance of this is evident when it is realized that the ultimate load in a press is applied on the molding thickness bearers, which are often at the extreme edge of the platens. In addition, there are several basic features of hydraulic press construction that will assure the maintenance of initial press accuracy. For example, presses of four-column design, while common many years ago, have long since given way to the more rigid, permanently accurate designs employing the superior side plate and band housing types of construction.

Correct press size

The handicap of too small a molding press can prove far more costly than the possibility of over-investment in too large a unit, although extremely excessive size can likewise be a waste, if not an actual handicap. Determination of size for a given application depends upon: (1) maximum overall size of chase where type forms will be molded, (2) maximum overall size of originals or pattern plates where these are to be used for molding, (3) maximum overall size of matrix, or group of matrices, where these are to be "ganged" for molding, (4) consideration of future volume and type of work.

Adequate pressure capacity

The maximum rated tonnage of a molding press, in relation to its platen size, is the next essential consideration. As in the case of size, a press of too low tonnage capacity can prove a costly error, although excessive tonnage can also be a handicap and wasted investment. Deciding on the proper press tonnage involves mainly: (1) maximum pressure per square inch of work area required to mold the matrix and plate materials, (2) nature of the forms and plates to be handled, (3) consideration of trends in molding materials being developed.

Steam vs. electric heating

There has been considerable controversy as to whether electric or steam heating is preferable for vulcanizing presses. The method of heating is not, in itself, important, providing the heat is uniform over the platen surfaces and remains so at all times. There are, however, definite advantages in the proper choice of steam or electric heating. This choice should be determined by press size, types of plates to be made, plant conditions, and relative local costs of gas and electricity.

Proper operating controls

Inadequate or inefficient operating controls minimize the usefulness of an otherwise satisfactory press. Proper operating controls must provide (1) accurate control of the closing stroke of the press particularly at the point of contacting the work, (2) application of molding pressure at an accurately controllable rate, (3) accurate control of molding pressure itself. If the nature of the work is such that these operations are to be uniformly repeated, mold after mold, the use of semi-automatic controls should be considered. Optional control arrangements should be available from the press manufacturer.

Overall considerations

The experience of the press manufacturer is a factor that must not be overlooked. Lake Erie Engineering Corporation is not only one of the world's outstanding builders of hydraulic presses for heavy industry, but has produced more than 1,000 molding presses for the printing and allied industries. These firms are engaged in molding the most precise types of rubber and plastic plates in plants of all types throughout the United States, Canada, and fifteen foreign countries . . . a record unmatched by any other hydraulic press builder.

A thorough consideration of *each* of the factors considered here will yield the greatest possible advantages to any plant using rubber or plastic plates. Inferior molding equipment will reduce or eliminate the advantages and economies of rubber or plastic plate printing.

THE MODEL 27 ACRAPLATE illustrated is one of ten models ranging in capacity from 115 to 550 tons and having platens measuring from 17" by 22" to 36" by 44".

SEND FOR DETAILS — *The information published above is a summary from the bulletin entitled: CHOOSING A PLATE MOLDING PRESS which has been used as a guide by leading plate molders for many years. The bulletin itself will bring you many additional details. Write for a copy today.

LAKE ERIE ENGINEERING CORP.

568 Woodward Ave. Buffalo 17, N. Y.

Manufacturers of the Lake Erie DIRECTOMAT...the leading equipment for direct pressure mat molding.

LAKE ERIE® ACRAPLATE® DIRECTOMAT®

LAKE ERIE HYDRAULIC PRESSES

Sees Up To

33% MORE & BETTER!!

Yes, the squint and strain have been taken out of linecasting by Matrix Contrast Service. Linecasting efficiency is increased an average of 33% through error-reduction: — less effort, less eyestrain, and less fatigue mean minimum errors and maximum production. For the employer, this means less correction time, all down the line.

With Matrix Contrast Service you get Black and White and/or Colors applied to old as well as new matrices. All this is expertly done by trained technicians either in your plant or at our nearest service branch. When you buy new matrices, deliveries are made direct to our plants which are equipped to operate 24 hours a day. Result: You receive prompt delivery and your production schedule is in no way interrupted.

Write today for complete information on this original *time-proven* Matrix Contrast Service. You will want to hear about our new, inexpensive "essential" maintenance plan.

MATRIX CONTRAST SERVICE

MATRIX CONTRAST CORPORATION
154 West 14th Street, New York 11, N. Y.
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The Art of **Buying Paper**

(Reprinted from *Better Impressions* by permission of Frank Gerhart, Advertising Director, Mead Papers, Inc.)

There's only one way to buy paper, any paper merchant will tell you, and that is to buy it for the job. Make paper play its part in the production, they say, so that it will support the tactics of the designers. You can achieve so many effects with paper. You can heighten the charm, dignity or femininity of a printed piece; lend it a businesslike quality; make it look low brow or high brow, just by picking the right papers.

But there are so many factors modifying the high ideal of paper-for-the-job that most printers have decided paper buying is an art, the art of the possible. They do the best they can, taking into consideration the needs of the job, the wishes of the customers, the limitations of their presses, the availability of stock, the skills of their pressmen, and, last but not least, the time they are allowed before the job goes to press. They do the best they can and develop high skills in steering around, above and under, all the traps and pitfalls that await the unwary.

Time is of the essence in smart paper buying, and time is something that customers never consider. Take, for example, a job that came in the other day. The customer, a rare bird because he knows and likes paper, requested paper X, a fine offset sheet with a pleasing texture. An excellent request, in the eyes of the estimator.

Moreover, the paper was obtainable, for it was stocked by several merchants in the city. But soon it was discovered that the size of sheet available would necessitate a very uneconomical cut with a wastage of almost one third. (Pitfall No. 1.) Was there a way out?

It was a 10,000 lb. order. Why not make it a mill order, buy the size that would cut exactly, and then everybody would be happy. "Good idea. Here's the size we need, and when can you deliver?" "Five weeks." "Five weeks?" (Pitfall No. 2, as you will soon see.)

"Wait while I check how much time we have . . . Sorry, job has to go to press tomorrow."

The tactician printer exercised his art-of-the-possible and gave him "something almost as good," which cut economically, dealt tenderly with the budget, and could be delivered overnight.

Most printers, especially the larger ones, tend to standardize on several types of paper. The choice is governed by two factors: the requirements of their presses and

the requirements of their regular, their bread-and-butter, job. They actually stock an inventory of these papers in order to take advantage of volume prices.

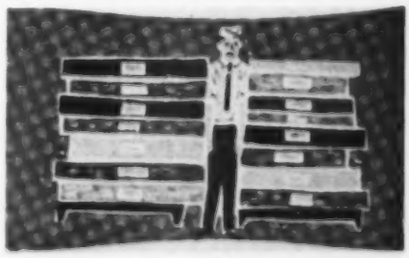
These stocks of paper in their warehouses are logistically of prime effectiveness. The printer's salesmen, fully aware of the need to put the supplies to service, are unlikely to recommend other papers unless inventory gets low. The dual price advantage permits a pincers movement.

There is an additional factor in the area of price which printers are careful to keep in mind. When they buy at the 10,000 lb. rates, or even higher, for regular customers, they pass on the savings to the customer.

Printers, by the way, who buy in quantity, almost invariably rely on the big producers, the papermakers who warehouse large tonnage within convenient distances of their presses.

In exercising the art of the possible, a printer buying paper for a job requiring 7000 lbs. of paper will consider whether 10,000 would not be a more economical buy. The extra pounds go into stock, and when another occasional customer comes in with a job requiring 3000 lbs. the printer finds the price a significant sales clincher. He will undoubtedly use it with the utmost diplomacy and bring home the order.

Another, and not uncommon, method of operating puts the responsibility for scheduling jobs where printers often wish it rested permanently—on the printer. In this case a printer has his paper stocks and his presses ready, but no one job big enough to permit an economical run. He then goes out and brings in other similar jobs, so that he can gang print. Folders, for example, or letterheads. If, by running four separate folders, envelope-stuffer size, he can simultaneously give all four customers the advantages of a long run on a large press, everybody benefits. But in a maneuver like this, customer and printer



have to give each other time, that rarest of elements in the printing industry. Given time, the art of the possible brings satisfaction and profit to all parties in the deal. But until it can always be delivered overnight, buying paper remains an art of compromise.

Craftsmanship

Craftsmanship in 1956, as it has for generations past, is a demanding activity. It takes time to be competent in one's trade. It takes time to Share Your Knowledge with others. It takes time to be friendly and helpful. Yet Craftsmanship and the Intl. Assoc. of Printing House Craftsmen are built on the proposition that there are men who will take the necessary time to be competent, friendly and helpful. On these pages are pictures of the leaders in the Craftsmen's movement. These men, as much or more than others, have given of their time and effort for Craftsmanship. *Printing Equipment Engineer* salutes them and their organization as the Craftsmen hold their 37th Annual Convention at the Biltmore Hotel, Los Angeles, Calif., August 12 to 15.

p 1956

A. R. (Tommy) TOMMASINI

President of the Intl. Assoc. of Printing House Craftsmen, Inc.; superintendent of the University of California Press, Berkeley, Calif.; speaker and author on typography and design; and one of the most foot loose presidents the Craftsmen have had for years.

GEORGE WISE, International first vice president, is partner-superintendent, Dugan-Millis, Inc., Cleveland. As a printer's printer, Wise has been a popular and busy figure this past year visiting various clubs and meetings. He's eager to do more this year.

FERD VOILAND, International second vice president, is State Printer of Kansas and another extremely busy travelling Craftsman. Don't let Voiland's relaxed style fool you, he's a thorough planner and likes to get things done. Voiland is a real gentleman.

ALBERT L. KOLB, International third vice president, is manager, Printing Department, Marine Trust Co., Buffalo, N. Y. Kolb is the kind of sincere and dedicated Craftsman who make the International movement possible. He has proved his staying power through five terms as International treasurer; he is demonstrating it again as a vp.

MARK H. CAROTHERS, International treasurer, is manager, Printing Department, First National Bank, Dallas, Tex. An ardent, shirtsleeve Craftsman who has progressed to an International office on his merit, Mark is following through with a fine performance. He's been a manager for 23 years.

THOMAS P. MAHONEY, *Share Your Knowledge Review* advisor and International Immediate past president, is vice president, Regensteiner Corporation, Chicago, Ill. Mahoney is an ardent advocate of Craftsmanship and color in printing in that order.

PEARL OLDT is executive secretary of the International and only the most rank neophyte in the organization doesn't know it or hasn't benefited from some of Oldt's efforts. Oldt's a man who knows all the ins and outs of Craftsmanship 'cause he's been through them. If you don't know, ask Pearl.

WISE

VOILAND

KOLB

CAROTHERS

MAHONEY

OLDT

ELLAM

H. ALBERT (BERT) ELLAM, International membership chairman, is manager of research and development and superintendent, Lithographic Division, Rolph-Clark-Stone, Ltd., Toronto, Can. He has served the Toronto Club in all capacities, including president.

KEEFE

HOWARD N. KEEFE, International publications chairman, is sales representative, Cincinnati Lithographing Co., Cincinnati, O. Keefe is an old pro of the International and the Cincinnati Club of Printing House Craftsmen, of which he is a past president.

STANDISH

JOHN K. STANDISH, International public relations chairman, is with the Statesman-Journal Publishing Co., Salem, Ore. Standish is and has been a machinist, linecomposing machine operator, foreman, floor man, editor, feature writer and historian and collector.

BURCHARD

KENNETH R. BURCHARD, International technical chairman, is Professor of Printing Management and head of the Department of Printing Management, Carnegie Institute of Technology. Now a recognized authority on many phases of printing, Burchard began as a printer's devil.

COOPER

THOMAS L. COOPER, International representative at large, is president and general manager, Southern Photo Process Engraving Co., Atlanta, Ga. Cooper helped organize the first Printing Week held in Atlanta, in 1950. He's a member of the Atlanta Club.

HOLMQUIST

GORDON J. HOLMQUIST, International advisory council chairman, is a partner in the Cole-Holmquist Press, Los Angeles, Calif. Holmquist is a past president of the Los Angeles Club and has been president of the Pacific Society of Printing House Craftsmen, Inc.

RITTERBAND

ROBERT M. RITTERBAND, International chairman of the special committee on club bulletins and deputy representative from the twelfth district, is a partner in the Lincoln Printing Co., Los Angeles, Calif. He collects bus and street car tokens; he has more than 500 different varieties.

HELBERT

CLIFFORD L. HELBERT, International chairman of the special committee on club programs, is manager of Marquette University Press, Milwaukee, Wis. He has done free lance magazine layout and was formerly in direct mail advertising. He's a Ph. B.

PETERS

ALFRED T. PETERS, International chairman of the special committee on Constitution and by-laws, is sales manager and vice president, Thomas C. Peters Printing Co., Utica, N. Y. A past president of the Utica Club, he's been a district representative also.

KING

HOWARD N. KING, International coordinator, is typographic counsellor to Intertype Corporation, and is vice president, The Maple Press, York, Pa. One of the more widely travelled and widely heard speakers in the Graphic Arts, King is still on the go.

CULVER

BYRON G. CULVER, International chairman of the special committee on Graphic Arts education, is supervisor, Department of Publishing and Printing, Rochester Institute of Technology. He does free lance work in the field of design as well as educational work.

AUGUSTINE

LEE AUGUSTINE, International chairman of the special committee on international exchange, is vice president of The Printing Machinery Co. Lee added to his reputation by sparking the Cincinnati convention last year. Here is another man who likes to get things done.

MILTON HORN, International historian, is pressroom foreman, Marvin D. Evans Co., Ft. Worth, Tex. Horn has many honors to look back on: Past president of the Ft. Worth Club and of the Ninth District. He is especially interested in letterpress work.

A. TED ANNEN, International chairman of the special committee on participating memberships, is president, Shelby Photo Engravers Co., Detroit, Mich. His hobbies, besides the Detroit Club of Printing House Craftsmen, include bowling, hunting, gardening.

ROBERT M. EDGAR, International chairman of the International Printing Week committee, is president, Neyhart Printing Co., Pittsburgh, Pa. Here is a busy, conscientious Craftsman who has done much for the Pittsburgh Club and the Fifth District already.

HORN

ANNEN

EDGAR

PETER J. BERNARD, International chairman of safety, is director of personnel and safety for the H. Wolff Book Mfg. Co., Inc., New York, N. Y. He is interested in all phases of personnel work but especially in the subject of safety. A persistent worker.

WILLIAM F. GUTWEIN, International chairman of the special committee on supervisory training, is president, Wm. F. Gutwein, Inc., Louisville, Ky. Bill got his B.A. degree from Antioch Cooperative College. His special interests are negotiating and people.

OLIVER F. JOHNSON, International first district representative, is vice president and treasurer of the Bond Press, Inc., Hartford, Conn. Johnson has his B.S. degree from Trinity College, Hartford, Conn., and has taken the LTF courses at New York College.

BERNARD

GUTWEIN

JOHNSON

FRED A. WOODWARD, International first district deputy representative, is sales and production manager, Melrose Free Press, Inc., Melrose, Mass. Woodward's firm prints the first Massachusetts weekly newspaper which adapted the 9 col. format to flatbed work.

WILLAM H. GRIER, International second district representative, is sales manager of the Kenyon Printing Co., Inc., Syracuse, N. Y. Grier likes fishing and hunting and "giving the customer good service," he says. He's past president of the Syracuse Club.

LOUIS A. CROPLIS, International second district deputy representative, is eastern regional manager, American Type Founders, Inc., New York, N. Y. Croplis has been president of the Cincinnati (O.) Supplymen's Guild. He has been with ATF for over 30 years.

WOODWARD

GRIER

CROPLIS

BERNARD L. ROCHFORD, International third district representative, is plant superintendent, Gazette Printing Co., Ltd., Montreal, Can. Rochford's firm is one of the oldest in North America, having been formed in 1778; he's been with it for 15 years.

JAMES T. KEATING, International fourth district representative, is manager of Bingham Brothers Co. in Baltimore, Md. Keating is interested in color photography as well as in the Baltimore Club of Printing House Craftsmen, of which he has been treasurer.

JOSEPH J. GREEN, International fourth district deputy representative, is assistant to the vice president, Mack Printing Co., Easton, Pa. He is a member of the Lehigh Valley Club and is a past president of it. Green has been associated with his present firm since 1937.

ROCHFORD

KEATING

GREEN

LARSEN

CARL H. LARSEN, International fifth district representative, is with the Braden-Sutphin Ink Co., Cleveland, O. Larsen has also been associated with Universal Engraving Co. and Petrequin Paper Co. He's a member of the Indianapolis Craftsmen's Club.

JOEL

WILLIAM H. JOEL, International fifth district deputy representative, is vice president Service Electrotype Co., Pittsburgh, Pa. Joel is primarily interested in sales work and sales promotion. He is a past president of the Pittsburgh Craftsmen's Club.

LOHR

MARVIN R. LOHR, International fifth district deputy representative, is president, Michigan Litho Graining & Supply, Inc., He has held a number of Craftsmen offices, including secretaryship of the Detroit Club; he's also a member of the Detroit Litho Club.

ASKINS

LOREN E. ASKINS, International fifth district deputy representative, is assistant general manager, The Gebhart Folding Box Co., Dayton, O. Askins is a past president of the Dayton Club. He's been a stripper, pressman, estimator and plant superintendent at various times.

ELLIS

EARL S. ELLIS, International sixth district representative, is sales manager, Western States Envelope Co., Milwaukee, Wis. He has been with this firm for 20 years. Ellis is a past president of the Milwaukee-Racine Club and has been a Craftsman 21 years.

FITZPATRICK

SAM H. FITZPATRICK, International seventh district representative, is a salesman for Miehle Printing Press & Mfg. Co. in New Orleans, La. He has also been a plant superintendent. Fitzpatrick is a member of the New Orleans Craftsmen's Club.

ATWELL

C. R. ATWELL, International seventh district deputy representative, is manager of the Sam'l Bingham's Son Mfg. Co. office in Atlanta, Ga. He's been a vice president of the Atlanta Craftsmen's Club. Hobbies include golf, fishing, and home movies.

HUGUES

ANDRE P. HUGUES, International eighth district representative, is manager of the Printing Department, Harry Turner & Assoc., Inc., Topeka, Kan. He has been a Craftsman since 1937; he's a past president of the Topeka Club of Printing Craftsmen.

TURNQUIST

RUDY G. TURNQUIST, International eighth district deputy representative, is branch manager, Sam'l Bingham's Son Mfg. Co. in Des Moines, Ia. Turnquist has been a member of the Des Moines Club for 30 years and is a past president. Hobbies include fishing.

FRIEBEL

HERMAN J. FRIEBEL, International eighth district deputy representative, is estimator in the Contract Division, Von Hoffman Press, Inc. He is a past president of the St. Louis Club of Printing House Craftsmen. Friebel was a pressman at one time.

GALE

HAROLD G. GALE, International ninth district representative, is general manager, Waples-Platter Co., Label Mfg. Division, Ft. Worth, Tex. Gale is a charter member and a past president of the Ft. Worth Club. He has attended every ninth district meet.

WEBB

JOHN W. WEBB, International ninth district deputy representative, is manager of the Sam'l Bingham's Son Mfg. Co. branch in Houston, Tex. He's been Printing Week chairman and on the board of governors in the Houston Club of Printing Craftsmen.

Craftsmanship 1956

HARRY W. FOGELBERG, International tenth district representative, is vice president, Western Engraving & Colortype Co., Inc., Seattle, Wash. He has been with his present company for 21 years. Fogelberg is a member of the Seattle Craftsmen's Club.

KENNETH R. BONNELL, International eleventh district deputy representative, is sales manager and co-owner of Dome Engraving Co., Sacramento, Calif. He is a past president of the Sacramento Club. Bonnell has been a stripper, printer, and photographer.

GORDON T. MATSON, International twelfth district representative, is owner of the Modern Typesetting Co., Los Angeles, Calif. Matson has operated this firm for approx. 9 years and enjoys the day to day work of getting typographic production the best.

BURTON E. LINDBERG, International twelfth district deputy representative, is western manager, Vandercook & Sons, Inc., Los Angeles, Calif. He has been a vice president of the San Fernando Valley Club. Besides craftsmanship, Lindberg enjoys music.

J. ERNEST DUCHARME, International fourteenth district representative, is superintendent of the composing room, Webb Publishing Co., West St. Paul, Minn. He has held all the offices, including president, of the St. Paul Club of Printing House Craftsmen.

Among the camera shy members of the official family of the International Assoc. of Printing House Craftsmen are: JAMES E. SHAW, International third district deputy representative; HARRY THOMPSON, International eighth district deputy representative; KARL E. HOFFMAN, International eleventh district representative; and ROY DE KARVER, International eleventh district deputy representative.

FOGELBERG

BONNELL

MATSON

LINDBERG

DUCHARME

Expands Graphic Arts Div. — Southworth Machine Co., Portland, Me., has expanded manufacturing facilities of its Graphic Arts Division through a new 17,000 sq. ft. building shown here, says Eugene Rich, president. Southworth's line includes hand, foot power punching machines; envelope presses; automatic skid lifts; corner cutters; humidifiers; holdfast hangers; paper conditioners; punch heads and Southworth automatic lift table.

George L. Curle, machinist of the Minneapolis (Minn.) *Star*, is shown greeting the new president of the Northwest Machinists Club, Robert Kippers. A recent meeting of the club was held at the Twin City Lino Service Shop in Minneapolis. Besides Kippers, machinist with The St. Paul (Minn.) *Dispatch*, other officers elected were Sterling J. Hoff of Twin City Lino, vice president, and Bill Gruber of West Publishing Co., secretary. Curle has been active in the club from its beginning and has been the only president until the recent meeting. The club also voted to meet four times a year with meetings to be held at various Twin City plants.

TV Supplement Sells Itself With Color and Slick Paper

The important part that layout, typography, full-color reproduction and slick paper can play in reader acceptance of a newspaper television supplement was reflected in letters to the editor of the Chicago *Tribune's* new *TV Week*. Richard Blakesley, editor of the publication, reported that he received congratulatory letters, telegrams and phone calls making complimentary reference to the magazine's new format, readable type faces, full color photographic reproduction, or program arrangements. The magazine size supplement is printed each week by American Colortype Co. Its listings present each day's TV programming complete on two facing pages.

Du Pont Label Change

The entire line of Du Pont films, photographic papers, and chemicals has a new look. The familiar blue packages with yellow labels have been replaced by a bright red, with labels in white on a black background. Labels have been redesigned to provide more product information. New film package labels, for example, feature the notching code for the particular film, providing a visible reference.

Raised Printing

What it is, how it is produced — its business and social uses

By PHILIP MASTERPOOL*

**Sales Manager, Virkotype Corporation, Plainfield, N. J.*

No doubt you have noticed that the average person rubs a finger over an invitation or business card upon receiving it. The third dimension effect in raised printing seems to make him want to apply the finger test. It may also be observed that many people who know little about printing do this as well as those familiar with printing processes. The third dimension causes the action. In this respect Raised Printing *does* compel attention.

Raised printing has made tremendous strides in the past 10 or 15 years. It has gained acceptance in the social world, with Emily Post giving it her blessing, for use in wedding announcements, invitations, and other formal printed matter. In the business field, calling cards and letterheads in raised printing are showing a tremendous volume increase each year; and in the greeting card field, literally millions of cards are being produced with thermographic decoration in a wide variety of patterns and designs.

The beauty of Thermography or Raised Printing cannot be duplicated by any other method in the Graphic Arts.

In stationery manufacturing, very fine dull and gloss embossed effects for letterheads, envelopes, announcements, business cards, programs, etc., are secured.

In greeting card and novelty printing, brilliant gold, silver, white sparkle, glitter and snow effects add to the beauty of the printed piece.

In paper carton, wrapper and folding box manufacturing, high raised embossed effects in gloss color and brilliant metallic gold, silver, white and other effects attract the customer's eye.

What is Thermography?

Thermography starts with conventional printing with the usual printers' type form and letterpress printing presses. However, a special non-drying printing ink of the chosen color and the compound for raised letter printing, is employed.

The Automatic Virkotype machine is portable and is rolled up to the delivery end of the assigned press. Speed of operation of the Virkotype machine is paced with the speed of the printing press. As the sheets come off the printing press, the Virkotype machine performs operations automatically in the following sequence: (1) Powder-like compound is applied inside the Virkotype enclosed unit to the wet ink impression on the sheet just delivered from the press; (2) The powder-like compound particles adhere to the special wet ink; (3) The excess powder lodging on the paper sheet is removed by suction just before the printed sheet passes into (4)

Virkotype's Raised Printing Machines Explained Pictorially

1.—The Model H hand machine, is designed for use in the smaller job shop where it is desirable to roll the machine out of the way when not in use. Sheets up to 12 in. in width can be handled. Machine is equipped with variable speed and heat controls. Because of its small size and portability, it is used in shops where raised printing is required only occasionally, or for certain special customers.

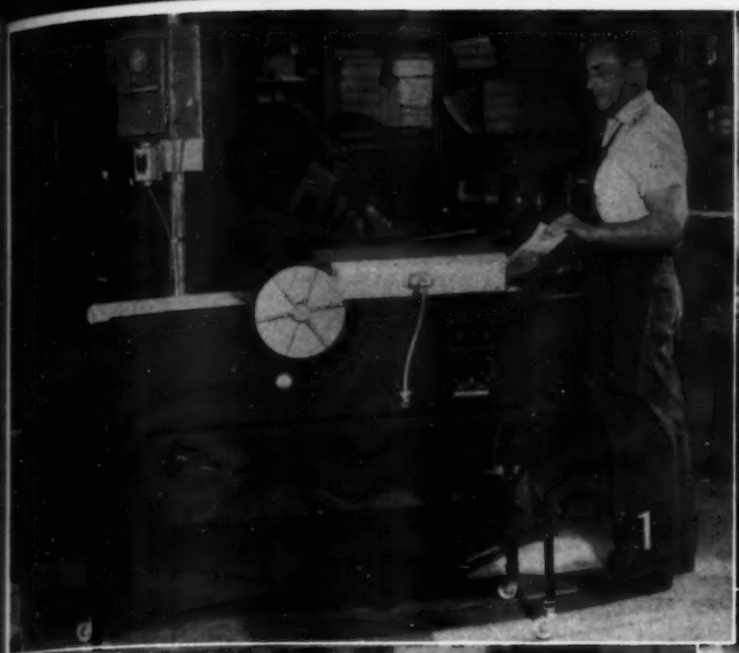
2.—Virkotype's largest machine is the Model G-30, a heavy duty automatic shown in this illustration handling sheets 27 in. by 41 in. This machine takes sheets to 30 in. wide and is built, when required, to take the printed sheets at right angles as they come from the press. The G-30 receives the large sheets at regular press speeds up to 6000 sheets per hr. and puts them automatically through the raised printing process of powdering, heating, cooling and stacking.

3.—Where a 12 in. sheet width capacity is sufficient, the Standard V-12 or the V-12 Super is used. The Standard V-12 is used a great deal by the stationer and job shop where occasionally it is desirable to hand-feed short runs from job presses, which this machine will permit, even though it is an automatic. In situations where steady day and night production at top press speeds is necessary, the V-12 Super automatic is used, because it is specially designed to take the pounding which is given to it in the shops of manufacturing stationers.

4.—Many of the trade thermographers use the Model L-15 for producing letters, announcements and envelopes on a ganged-up system, handling a variety of imprints and sizes during the course of a day's work. This machine allows for sheets up to 15 in. wide.

5.—Still another class of work with some special requirements in the way of raised printing equipment is the greeting card, label, and box wrap industry. The Model B-20 heavy duty automatic handles the runs from Kelly, Miehle, and Miller presses. The B-20 takes sheets up to 20 in. wide.

6.—All of the Virkotype machines are portable and may be rolled up to the press or rolled away in a matter of minutes. The Virkotype conveyor receives the sheets directly from the press as printed. No special hookup is required and it will operate with all standard automatic printing presses.



An oven where the heat from electrical or gas heating elements above the sheet fuse the powder and ink causing the printing design to rise in relief above the sheet of paper; Finally, the sheet passes through a cooling chamber to cool the paper and to harden the fused mixture of ink and powder in its permanent raised form on the sheets. Thus the sheets are subjected to these various operations automatically on an endless variable speed conveyor direct from the press operation at normal press speeds.

With more than 40 years experience in the development of machines, compounds and inks for raised printing, Virkotype Corporation is manufacturing for the Graphic Arts industry production machines that range from the Model "H" for hand production of small runs, through a series of five models, 12 in., 15 in., 20 in., and 30 in. wide for fully automatic high speed production. This range of machine models allows selection of the model best suited

Returns to *Printing Equipment Engineer*

Printing Equipment Engineer is pleased to announce the return of Edward H. Owen to its editorial staff. He commenced his new duties as associate editor in August.

Owen completed a printing technical course at Rochester Institute of Technology, class of 1948. Immediately after, he came to *Printing Equipment Engineer*. Following six years' association with this magazine he joined *Printing Magazine* in 1955 as assistant editor. He now returns to *Printing Equipment Engineer* as associate editor.

During his editorial association with both magazines, Owen has made a wide acquaintance in the Graphic Arts industry. He has written many technical articles regarding new developments. He specializes in articles related to production techniques. His major "extra curricular" activities have been with the Cleveland and New York Clubs of Printing House Craftsmen and attendance at a considerable number of national Graphic Arts industry conventions. He is married and has a son, Jeff, 3½ yrs. of age.

for different pressroom requirements, such as available floor space, presses employed and production speed requirements.

Raised Printing Costwise

Costwise, Raised Printing compares favorably with flat printing, and is much less expensive than engraving. There are no additional labor costs involved as the pressman finds no difficulty in handling both press and Virkotype. It has been established that 1 lb. of Virkotype Compound produces from 10,000 to 15,000 letterheads, or more than 25,000 business cards. With the cost of ink, paper and press time remaining the same as for ordinary runs, it follows that this business when developed to reasonable volume can be profitable. It is usually priced out to the customer at charges comparative to conventional two-color work.

Raised Printing Volume

Typical example of the expanded use of Raised Printing is found in the large number of plants equipped with several size models, and as many as 15 to 30 Virkotype machines in a single plant installation. Conservatively estimated, approx. 80% of all social stationery and 61% of all business card production are now produced in Raised Printing. Effect of this expansion has resulted in technical development of allied lines such as presses, rotary card trimmers, conveyors, paper stock and folders for streamlining production. In the greeting card and stationery fields, impressions per hour have reached a speed of 6000 i.p.h. At these high speeds the sheet is delivered dry and finished, ready for immediate handling or shipment.

Special Base Ink

A fundamental factor in producing good Raised Printing is the base ink used. As the thermographic process takes the sheets from any standard printing press, it was soon discovered that the usual printing inks had a tendency to soak into the paper and to dry too quickly. A moist surface is required for application of the powdered compounds to give satisfactory results. Virkotype's "X" Base inks were scientifically developed to be practically non-drying; they will stay on the surface of the sheet; they form a binder between the paper and the compound, and sharply confine the "raise" of the compound to the outline of the printed character. The pigments in this base ink will withstand the heat of the process without changing color—a most important consideration in raised printing.

Powder Compounds

Equally important are the compounds used. They fall into three main categories, Gloss, Dull and Metallics. They are flexible and adhere tenaciously to most stocks. Gloss and Dull are transparent and the color of the ink used in printing determines their color. The metallic colors are opaque. The most popular metallics used are Silver, Rich Gold, Rich Pale and Pale Gold. Certain special effect compounds are available. These are described as Sparkle and contain variegated mixtures of tinsels, transfer compound for embroidery patterns, opaque white and colored compounds for use on dark color paper stock.

Raised Printing's Place in Graphic Arts

There is no doubt that Raised Printing has attained an important place in the Graphic Arts. The buyer of printing is receptive to the unusual. He is less responsive to run-of-the-hook jobs. This is borne out by the demand for more intense color and greater preparation in art and design. Speed, economy, and craftsmanship are combined in the Raised Printing process when used for the production of most greeting cards, social stationery, business stationery and many other jobs.

Thousands of printers in the United States have gone into raised printing in recent years, and shipments of machines, compounds and inks to foreign countries are being made in ever increasing volume. It has taken nearly 50 years to perfect this method but the effort has resulted in a real contribution to the art of printing and paper decorating.

Stephanie Libson, selected queen of the 70th Annual Convention of Printing Industry of America, Inc., Oct. 30-Nov. 2, Los Angeles, Calif., poses with Ralph Shepherd (left), vice president of the National Union Employers Section of PIA, and Sid James (right), president of the host Printing Industries Assoc., Inc., of Los Angeles. Stephanie will be on hand to greet the visitors who are expected to come to Los Angeles with their wives for the event.

Phototypesetting— Relief Printing Plates

Major topics at Chicago meeting of Research and Engineering Council

Two major topics dominated the recent Research and Engineering Council meeting in Chicago. The first of these was related to cold typesetting for photomechanical platemaking purposes. A working exhibit of a number of straight-matter and display phototypesetting devices was held.

The second major topic was a discussion related to many kinds of letterpress printing plates. In this connection there was a tremendous exhibit of 34 types of letterpress printing plates, the actual plate of each kind being shown with explanatory text telling the type of plate, together with the purpose of each plate.

The 1956 Annual Meeting was held at the Edgewater Beach Hotel, Chicago. Approx. 250 printing plant management and mechanical executives together with a liberal attendance of manufacturer and supplier representatives registered for the meeting.

Carl E. Dunnagan, president, The Inland Press, Inc., Chicago, was general chairman of the meeting.

Plant Visitations

The day previous to the actual opening of the Council's meeting was spent by a goodly number of those attending in visiting Chicago research, printing and manufacturing plants. Among the places visited were A. B. Dick Co., Armour Research Foundation, Rand McNally & Co., W. F. Hall Printing Co., Myercord Company, Miehle Printing Press & Mfg. Co. and LTF Research Laboratories.

Exhibiting Companies

Included in the companies exhibiting with actual equipment or displays demonstrating what can be done with the equipment, were the following: Intertype Corporation; Commercial Controls Corp.; Photon, Incorporated; Davidson Div. of Mergenthaler Linotype Co.; Filmotype; Halber Corporation; Charles Bruning Co., Inc.; Ralph C. Coxhead Corp., and Intl. Business Machines Corp.

Cold Typesetting for Photomechanical Plate Reproduction

There were two sessions on typewriter-like and phototypographic type composition for photomechanical plate reproduction. C. M. (Larry) Flint, staff consultant, Chas. T. Main, Inc., Boston, presided at both sessions. In his opening remarks, Flint said he was enthusiastic about the possibilities of phototypesetting. He remarked that cold typesetting is one of the most significant developments in the Graphic Arts in recent years.

In turn, he called upon representatives of eight manufacturers to explain briefly the working of the equipment and the purpose for which it is used.

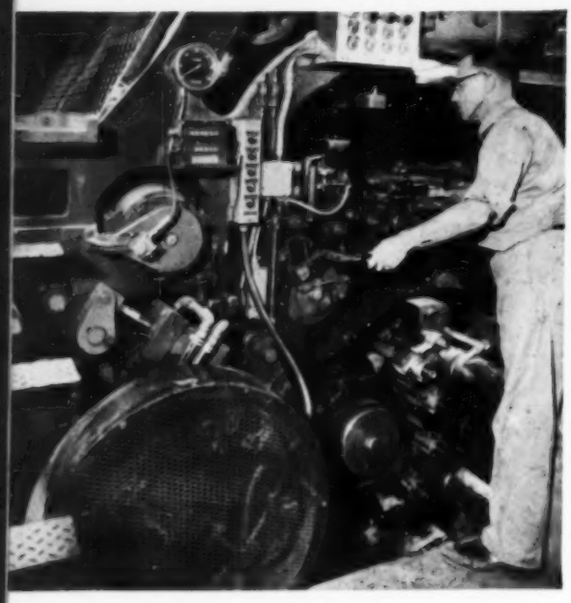
W. R. Liebtag, district manager, Intl. Business Machines Corp., explained the IBM Executive Model Typewriter. The letters are reproduced with proportional spacing and the capacity of the machine is from 60 to 100 words per min. A second typing to obtain equi-distant line width is necessary. Major uses of the type matter produced on the Electromatic is for listings and for straight book work. The facility for making corrections is permitted by pulling out or replacing any line needing correction. Liebtag explained that IBM had cooperated with Eastman Kodak Co. in developing the Listomatic Camera for mass list production.

High Speed Typing and Photomechanical Reproduction

R. E. Thalin, administrative assistant, Commercial Controls Corp., discussed the Commercial Controls system for high speed photomechanical reproduction. The equipment consists of five units: (1) The Justowriter typewriter on which the operator not only types on copy paper in the regular way but also punches a continuous tape. The tape is removed in roll form and placed in the (2) Reproducing machine, an automatic typewriter, where the type lines are retyped and justified to even line width on roll cardboard stock in continuous form. The lines of type on the card may consist of one, two or three lines, in properly justified form. On the Justowriter reproducer the composition is automatically reproduced at the rate of 100 five letter words per min. When the tape in the reproducer has caused the reproducer to type one, two or three line listings on a card, the line finder automatically advances the continous card to the first writing line of the next card in the exact position required from a code in the tape; (3) When a galley of continuous cards has been completed in the Justowriter reproducer, the galley is inserted in a form flow card cutter. This machine die cuts the cards into the exact tabulating size at the rate of 100 cards per min.; (4) The now die cut cards are passed along to an operator who codes holes in the cards. These holes are oblong in shape. This coding is required to tell the Kodak Listomatic Camera whether the cards contain one, two or three lines and is used to control the camera film advance so there will be no variance in line spacing between entries. The one line cards contain no code holes, two lines one code, and three lines two code holes. (5) The cards are then passed through the Kodak Listomatic Camera which photographs the listing on each card at the rate of 230 cards per min. regardless of whether

Research and Engineering Council's 1956-57 Officers **— From left to right they are: Treasurer, Ray Spiller, vice president, Harris-Seybold Co.; Immediate Past President, John Davis, jr., vice president, Judd & Detweiler, Inc., Washington, D. C.; Second Vice President, George Cornelius, jr., second vice president, Cornelius Printing Co., Indianapolis, Ind.; President, Felton Colwell, president of The Colwell Press, Inc., Minneapolis, Minn.; First Vice President, Samuel F. Chernoble, president, The Comet Press, Inc., New York, N. Y.; Secretary, Alan S. Holiday, manager, Craftsmen, Inc., Kutztown, Pa.; Managing Director, Robert E. Rossell, Washington, D. C.**

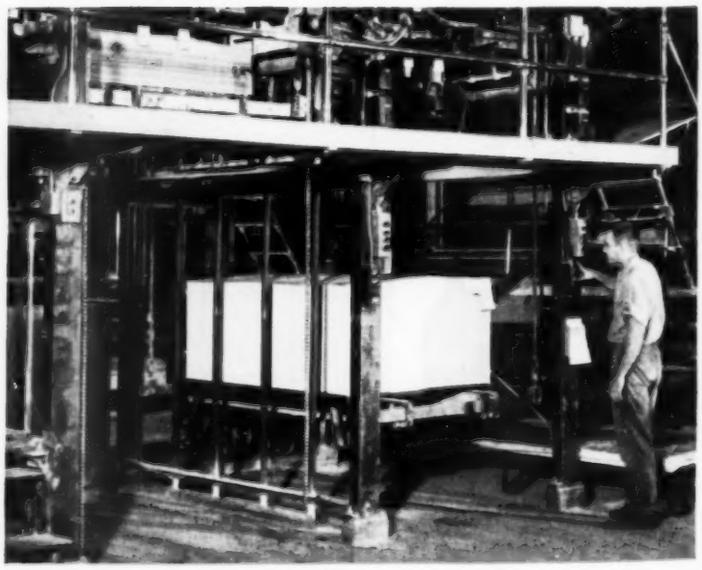
PLATE LOCKUP IS FAST with the Cottrell Rapid Register Hook System. Plates are securely locked to spirally grooved cylinders.



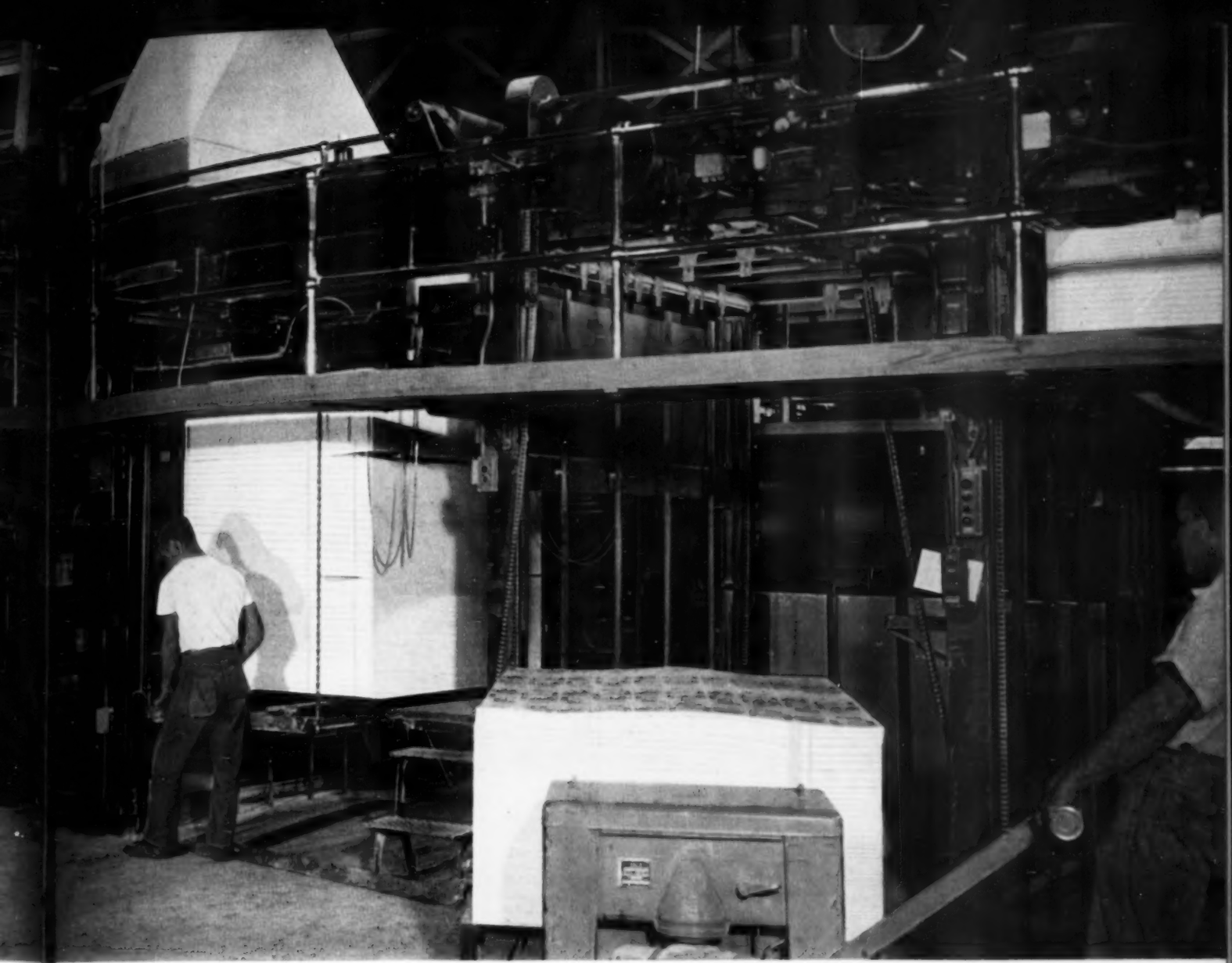
PNEUMATIC THROWOFF reduces down-time, speeds makeready. Plate cylinders are engaged or thrown off with pushbutton ease.

INKING IS QUICK, since each color unit can be handled from the floor. Fountain roll adjusting screws are also very easy to reach.

Cottrell 48 x 71" five-color rotary boxboard press at Sutherland Paper Company, Kalamazoo, Mich. Photos by William Richards.



NONSTOP UNLOADING is achieved with double delivery, very desirable for board printing, where stock piles up fast.



Here, a Cottrell prints color by the ton

To make money in the boxboard business, you print by the ton and ship by the carload. Much of the work is lavish with color.

This kind of printing calls for equipment that can handle boxboard accurately and fast, and print it with anything from a delicate tint to a bold, chromatic explosion. And in register. And evenly inked. And by the ton.

This kind of printing calls for a Cottrell.

Cottrell rotary boxboard presses, built on the common impression principle, achieve remarkable color fidelity at speeds as high as 6500 sheets per hour. They are available in 2, 3, 4, and 5-color models with single or double deliveries. Press sizes are 36 x 48″, 40 x 59″and 48 x 71″.

More and more boxboard printers—like most leading magazine and commercial printers—are finding that Cottrells make quality printing more profitable. In fact, *wherever printing is big business*, you see Cottrell presses at work. For the full story, check with your Cottrell representative, or phone The Cottrell Company, Westerly, Rhode Island.

The Cottrell Company

. . . a subsidiary of Harris-Seybold Company

WESTERLY, RHODE ISLAND

Phototypesetting Panel at Chicago R&EC Meeting

During the lively but informal phototypsetting session of the Research and Engineering Council's Chicago meeting in May a number of users of equipment participated. Chairman of the meeting was C. M. (Larry) Flint, Chas. T. Main, Inc. From left to right they are identified: Faulkner Lewis, production manager, Macmillan Company, New York; G. Prescott Lowe, publisher, Quincy (Mass.) *Patriot-Ledger*; Paul W. Miller, Machine Composition Co., Boston; Charles Waters, photo engineer, Intl. Business Machines Corp.; Fred Barnes, Moore Business Forms, Inc.; Franklin D. Schurz, publisher, South Bend (Ind.) *Tribune*; Raymond E. Geegh, Government Printing Office, Washington, D. C.; John I. Mattill, director public relations, Massachusetts Institute of Technology, Boston.

the card is set in one, two or three line listings. This camera is capable of photographing automatically from the same size up to 50% reduction, that is, from 5 lines per in. to 14 lines per in. The film used in the Listomatic Camera is high speed, high contrast film. The Listomatic Camera is portable and may be rolled into a dark room. Product of the machine may be classified advertising composition for newspapers and magazines, telephone directories, price lists, street directories and other composition of similar nature in quantity. The product of the machine in negative form may be used for offset printing plate reproduction or for use with high speed etching as in photoengraving.

Foto-List Equipment

Joseph Richardson, division manager, Ralph C. Coxhead Corp., reported on development of the Foto-List machine, which includes use of the Varityper for body typing and the Coxhead-Liner for typing display matter. This equipment is used for the composition of phone directories, parts list, price lists and the like. He said that the typing obtained from the equipment was equal in density to that of hot metal type composition. The Foto-List machine itself is designed for the composition of repetitive listings. The machine is not yet available on the market. Richardson reported, however, that four units are now being field tested. The equipment is about the size of a small spinet piano and any size card may be used. It will receive up to 2500 cards and will operate at a maximum speed of 450,000 ems per hr. of 60 pica line copy. A 100 ft. roll of sensitized film can be accommodated in the camera. Different point sizes of the typing may be obtained by micrometer adjustments. Thin base Kodalith film is used in the machine. In hot type composition, Richardson said, there are 12 operations as against 3 operations for the Listomatic Reproducing Equipment.

Photon Equipment

W. W. Garth, jr., president of Photon Incorporated, explained improvements which have been made in the Photon equipment. One of the recent improvements is a page indicator for copy which is equivalent to a blueprint. All instructions for the operator in doing phototypesetting work are carried on the layout. He explained the flexibility of the machine by mentioning the function of each of the buttons on each side of the keyboard. The product of the Photon is a positive for offset reproduction and a negative for photoengraving. He discussed the development whereby the emulsion is shaved from the film base for the purpose of making corrections in the type matter. This is called the line eliminator which has been developed to replace the film line cutting device previously used. This device eliminates the precision cutting of film and the necessity for using Scotch tape to splice the film together again after the corrected line has been inserted. Garth reported that up to eight layers of film can be overlayed on type composition and yet a clear film reproduction can be obtained. In the Photon machine is included a TTS tape perforator. On the tape itself, incorrect lines can be spliced out. Leading increments as small 1/10th pt. can be obtained between lines.

Fotosetter Equipment

Earl Godshall, manager, Fotosetter Div., Intertype Corporation, discussed progress which is being made in the phototypesetting field with his firm's Fotosetter. Godshall stated that 11 daily newspapers including two in Australia have installed Fotosetter

Members of the panel on what was termed *Cold Composition Session* of Research and Engineering Council meeting, Chicago, in May. (Actually, the typesetting devices discussed consisted of typewriter-like and phototypesetting machines, the products for all being reproduced photographically for platemaking purposes.)

From left to right panel members are identified as follows: W. R. Liebtag, district manager, Electric Typewriter Div., Intl. Business Machines Corp.; Wm. W. Garth, jr., president, Photon, Inc.; Frank Doane, sales promotion manager, Davidson Corporation; Earl Godshall, manager, Fotosetter Div., Intertype Corporation; Robert E. Thalin, administrative assistant, Justowriter Div., Commercial Controls Corp.; Moderator C. M. (Larry) Flint, Chas. T. Main, Inc.; Joseph Richardson, manager, Foto List Div., Coxhead Corporation; Donald Hase, general manager, Filmotype Corporation; Ralph Stearns, general sales manager, Halber Corporation.

equipment. In addition, 9 machines are presently on order and a number have installed a second machine. Fotosetters are used in 31 states and 8 foreign countries. Installations range from one to five machines in each plant. He stated that Intertype Corporation now is working on automatic development of film in the Fotosetter machine, an automatic quadding device and a 14 lens turret. The automatic quadding and centering device will have a range up to 51 picas wide, he said. Through the use of Resisto Rapid Paper, proofs can be obtained in less than 5 min.

ProType Display Equipment

Frank Doane, sales promotion manager, Davidson Corporation, discussed the ProType system for producing display lines of type ready for photomechanical platemaking operations. He said that there are 10,000 type styles, ranging in size from 18 pt. to 90 pt. Type composition can be executed in wdiths up to 17 in. Type may be justified normally, it may be letter spaced, it may be word spaced, it can be set in a curve or at an angle, and kerning letters can be fitted closely. Different type faces may be mixed in the same line. Doane explained that in order to eliminate pasteup work for the platemaker, a compositor could put the original layout sheet underneath the sheet to be exposed and could do his work by means of light transmission from below. Composition of display type one letter at a time is done by exposing each letter to sensitized film and/or paper.

Filmotype Display Phototypesetter

Donald Hase, general manager, Filmotype, described the Filmotype photolettering equipment which is used for composing display type both in standard and hand lettered effects either on paper or film. Filmotype is a contact exposure machine. Hase stated it was not built for speed. Over 1000 styles and sizes of type are available. Exposures are made through film, paper or sensitized film one letter at a time. The sensitized paper upon which the exposures are made is 2 in. by any length inasmuch as the paper or film is rolled and put in the magazine of the machine. Semi-gloss paper is available for retouching purposes. Primary use of the machine ranges from 18 pt. to 144 pt. Both film and/or paper are exposed and developed in the same machine.

Typro Display Phototypesetter

Ralph Stearns, general sales manager, Halber Corporation, discussed the Typro photolettering device. This machine is used to produce either negative or positive images on paper or film by exposure of one letter at a time on the sensitized material. Type ranges from 6 pt. to 144 pt. A common base line permits intermixing of all type fonts. Letters may be slanted, shadowed or bounced. Size of the machine is 11 in. by 12 in. by 9 in. and its weight is 23 lbs. Developing chamber is attached to the machine. Developing and fixing is done while composition work proceeds.

R&E Council Executive Committee

Leo Augustine, The Printing Machinery Co., 436 Commercial Sq., Cincinnati 2, O.
William Baumrucker, jr., Photon, Inc., 58 Charles St., Cambridge, Mass.
Hon. Raymond Blattenberger, U. S. Public Printer, U. S. Government Printing Office, Washington 25, D. C.
Kenneth R. Burchard (Representing Intl. Assoc. of Printing House Craftsmen, Inc.), Carnegie Institute of Technology, School of Printing Management, Pittsburgh 13, Pa.
L. N. Carmain, Herbick & Held Printing Co., 1117 Wolfendale St., Pittsburgh 33, Pa.
Samuel F. Chernoble, The Comet Press, Inc., 200 Varick St., New York 14, N. Y.
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George H. Cornelius, jr., Cornelius Printing Co., 2457 E. Washington St., Indianapolis 7, Ind.
John H. Davis, jr., Judd & Detweiler, Inc., 1500 Eckington Place, N.E., Washington 2, D. C.
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Robert H. Downie, Marathon Corporation, Menasha, Wis.
G. L. Erikson (Representing Natl. Assoc. of Printing Ink Makers), Braden Sutphin Ink Co., 3800 Chester Ave., Cleveland, O.
C. M. Flint, Chas. T. Main, Inc., 80 Federal St., Boston 10, Mass.
Walter T. Flower (Representing Electrotypers and Stereotypers Assoc. of N. Y.), Flower Steel Electrotype Co., Inc., 461 Eighth Ave., New York 1, N. Y.
Wade E. Griswold, Lithographic Technical Foundation, 131 East 39th St., New York 16, N. Y.
William D. Hall, Folding Paper Box Assoc. of America, 337 West Madison St., Chicago 6.
Fred P. Hofferth, American Book Co., 300 Pike St., Cincinnati 2, O.
Alan S. Holliday, Craftsmen, Inc., 307-11 Main St., Kutztown, Pa.
C. L. Jewett, The Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
Morris S. Kantrowitz, U. S. Government Printing Office, Washington 25, D. C.
W. A. Kindorf, jr., The Interstate Printing Co., 3935 Laclede Ave., St. Louis 8, Mo.
John L. Kronenberg, S. D. Warren Co., P.O. Box 4, Boston 1.
Kimball A. Loring (Rep.: Adv. Typographers America), Machine Composition Co., 470 Atlantic Ave., Boston.
Paul Lyle, Western Printing and Litho. Co., 1220 Mound Ave., Racine, Wis.
John F. McQueeny, Strawberry-Hill Press, Inc., 23-02 49th Ave., Long Island City 1, N. Y.
J. S. Mertle, 7 Lake Boulevard, Oshkosh, Wis.
Dwight L. Monaco, Hughes Corporation, 71 W. 35th St., New York 1, N. Y.
H. E. Peyrebrune, Miehle Printing Press and Mfg. Co., 2011 W. Hastings St., Chicago 8.
Frank Pfeiffer, The Reynolds & Reynolds Company, 800 Germantown St., Dayton 7, O.
Walter S. Reed, Dexter Folder Co., 330 W. 42nd St., New York 36, N. Y.
George C. Schaefer, jr., Schaefer-Shepherd, Inc., 232 E. Fourth St., Los Angeles 13.
Joseph Schwartz, Westcott & Thompson, Inc., 1027 Arch St., Philadelphia 5.
Frank M. Sherman, Intl. Typographic Composition Assoc., 1015 Chestnut St., Philadelphia 7.
W. R. Spiller, Harris-Seybold Company, 4510 E. 71st St., Cleveland 5.
Vernon R. Spitaleri, Knight Newspapers, Inc. (c/o *Miami Herald*), 200 So. Miami Ave., Miami 30, Fla.
Gilbert Stevens, Minnesota & Ontario Paper Co., 500 Investors Bldg., Minneapolis 2, Minn.
Bernard J. Taymans, Printing Industry of America, Inc., 5728 Connecticut Ave., N.W., Washington 15, D. C.
Paul J. Thoma, Time, Incorporated, 9 Rockefeller Plaza, New York 20, N. Y.
C. Howard Thomas (Representing P.I.A.), National Publishing Co., 239 So. American St., Philadelphia 5.
Edward J. Triebe, Kingsport Press, Inc., Reedy and Roller Sts., Kingsport, Tenn.
Dr. William C. Walker (Representing individual membership), West Virginia Pulp & Paper Co., Williamsburg Development Laboratory, Williamsburg, Pa.
J. Homer Winkler, Battelle Memorial Institute, 505 King Ave., Columbus 1, O.

Phototypesetting Experience

The second session of the Cold Typesetting and Photomechanical Platemaking operation was presided over by C. M. (Larry) Flint, Graphic Arts consultant, Chas. T. Main, Inc., Boston. He was assisted by a panel of eight executive users of phototypesetting equipment. Brief reports were made by each member of the panel.

John I. Mattill, public relations director, Massachusetts Institute of Technology discussed the Photon machine. According to Mattill, MIT is concerned with high quality application work but at the moment can only base its Photon experience on smaller jobs in which a great amount of composition is not involved.

Phototypesetting at GPO

Raymond E. Geegh, U. S. Government Printing Office, Washington, D. C., said the transition from hot metal to phototypesetting was not one of replacing the letterpress method of printing. Phototypesetting should be regarded as a new tool to expand the horizons of printing. The importance of letterpress printing has not diminished but it is constantly being improved by many new techniques. He said the GPO has printed some publications, books and pamphlets involving mostly straight matter composition by the phototypesetting method.

Newspaper Ad Composition By Phototypesetting

Franklin D. Schurz, editor of the South Bend (Ind.) *Tribune* is enthusiastic about phototypesetting together with high speed ANPA-Dow magnesium etching for reproducing local display advertising. He gave a brief explanation of the *Tribune's* experience during the past 18 months. He believes the paste makeup man can do a better job with hot metal composition after a short training course in the technique of photomechanical reproduction. He spoke of the quality of phototypesetting in which frosty type faces and miters on boxes are eliminated. He did say, however, that in newspaper display advertising work a greater variety of type faces is needed. Presently the *Tribune* is operating two Fotosetter machines. Eventually, he hopes to set about half the local advertising display volume. About 5000 to 7000 col. in. per week are set at the *Tribune*. This represents approx. 25% of the local display advertising. He expressed the need for a quicker and more economical method for furnishing advertising proofs. Three Master-Dow etching machines are in use at the *Tribune*. He related that a depth of 0.40 in. in from 6 min. to 8 min. is attained to avoid routing the stereotype plates. He said that the only way in which the installation of phototypesetting equipment can be justified is when this kind of work equals or is below the cost of hot metal composition. He presented some figures to indicate that the cost of this kind of display composition is lower than with hot metal composition. He fully expects that within the next few years there will be a considerable reduction in phototypesetting costs.

R&EC's Letterpress Plate Symposium Panel—Chairman Mawicke was assisted at the Letterpress Plate meeting by the following panel members: Front row (left to right) Edward Christensen, vice president, Central Typesetting and Electrotyping Co., Chicago; Richard Gardner, manager, Beck Engraving Co., Philadelphia; Elmer Schwartz, president, Intl. Assoc. Electrotypers and Stereotypers, Inc., Chicago. Back row (left to right) Clem Mawicke, general manager, Pontiac Engraving and Electrotyping Co., Chicago; Carl Dunnagan, president, The Inland Press, Chicago, and chairman of R&EC meeting; Robert H. Downie, Marathon Corporation, Menasha, Wis.

Phototypesetting at Moore Business Forms

About 80% of the work related to business forms executed by Moore Business Forms is done by photomechanical methods. Fred Barnes of Moore Business Forms related that in his company's case, 50% of the work is repetitive. Some forms work is still being done by electrotyping or stereotyping. In new plants sponsored by Moore only phototypesetting equipment is being installed. He told of the excellent results being obtained with the Dow high speed etching method. Special equipment is used for ruling the negatives. According to the amount of corrections in proofs the negatives either are corrected or thrown away and a new negative containing the corrections is furnished.

Bank Checks, Money Orders

Charles Waters, photoengineer of Intl. Business Machines Corp. related that the Coxhead Liner and some Protype composition are used in the preparation of certain types of business forms cards such as bank checks and money orders. On the cards, 90% of the composition is by photomechanical means.

70% In Repro Proofs

Paul Miller, Machine Composition Co., Boston, related that 70% of his company's volume consists of reproduction proofs both on paper and on acetate, much of it for type reproduction for the making of electrotypes and plastic plates. The great majority of this work is demanded within 24 hrs. and some of it must be produced in 12 hrs. Phototypesetting and photomechanical equipment consists of a Photon machine, Fotomaster camera, Filmotype machine, Craftsman Line-up Table, a Potdevin waxing machine which is used to apply the adhesive for fastening the type reproductions to the layout, and a darkroom. Actually, on the phototypesetting equipment composition is restricted to straight matter. Miller related his company intends to use Photon equipment for commercial typesetting work.

Photon at *Patriot-Ledger*

Publisher G. Prescott Lowe of the Quincy (Mass.) *Patriot-Ledger*, related procedure and production data with respect to phototypesetting and photomechanical operation at his paper. Four Photon machines are now used and more will be added before the summer is over. Filmotype equipment is used for display type 36 pt. or over. An Ozalid machine is used for proofing. This machine is also used as a "material maker." A Potdevin machine is used for waxing purposes. When printing direct from curved plates the type matter is etched 0.020 in. deep. At this depth periods and commas are not lost in the etching process. On the Photon machines, the operators average two corrections or less per day per galley. One Chemco and one Master high speed etching machine for etching magnesium plates are in use. Two machines with two baths are used for halftone and line etching. Lowe said that the drying time for film is now less than 3 min. but wants to get it down to 1½ min. He said another problem exists with respect to a film cutting machine which will do the work satisfactorily. Lowe exhibited a tear sheet from the *Patriot-Ledger* in which there were 40 boxes (160 miters) for a 9 col. page advertisement for Sears. Such a page can be put together in from 4 hrs. to 5 hrs.

Photoset School Textbooks

Production Manager Bartlett Lewis of the Macmillan Company, New York, discussed the publication of books by phototypesetting. He said that in his company's experience there is a definite saving in cost in books done by phototypesetting and photomechanical methods. He cited a number of cases where phototypesetting had been employed to produce

(*Continued on Page* 104)

Phototypesetting Costs

During discussion from the floor there was considerable interest among people in the audience with respect to phototypesetting costs at the Research and Engineering Council's Cold Composition Meeting. Through Moderator, C. M. (Larry) Flint, executives in the audience asked the panel members questions regarding actual phototypesetting costs. It was the consensus of opinion among all of the panel members that phototypesetting costs are lower and would be even more lower in the future. Panel members, in answer to questions related to costs, said they did not have actual figures with them. Fred Barnes, of Moore Business Forms, stated that in forms composition costs are much less than for hot metal type composition. Editor Franklin Schurz of the South Bend (Ind.) *Tribune*, stated that in April the cost of phototypesetting was approx. 4% less than for hot metal composition. Schurz feels confident that the costs will be even lower in the future.

G. Prescott Lowe, publisher of the Quincy (Mass.) *Patriot-Ledger* said his cost figures indicate that they are much less than for hot metal composition. Raymond Geegh, Government Printing Office, stated definitely that costs for composition by phototypesetting are much less where there are large areas of white space and in the composition of forms. Paul Miller of Machine Composition Co., Boston, stated that on the more difficult type of composition it runs $20 per hr. This is comparable to 40c per sq. in. which seems to be less than for hot metal composition. Someone in the audience wanted to know about the "equivalent" equipment necessary to do phototypesetting as against hot metal composition. Raymond Geegh replied that equivalent composition for hot metal work would be two Linotypes, one Ludlow and one Vandercook Proof Press. The equivalent equipment for phototypesetting would be two Fotosetter machines, and one Typro or Halber machine.

Relief Printing Plates Exhibit-Discussion

At the second day's session of the Research and Engineering Council Meeting, Edgewater Beach Hotel, Chicago, the major topic for discussion was Letterpress Printing Plates.

Displayed for visual inspection, a tremendous live exhibit of 34 different types of letterpress plates was shown. Among those who sponsored and assisted in getting together the display of different types of letterpress plates were Clem Mawicke, president, Pontiac Engraving and Electrotype Co., Chicago; Carl E. Dunnagan, president, Inland Press, Chicago; William D. Hall, Folding Paper Box Assoc. of America; Edward Johnson of Tenak Products Co.; Frank J. Schrieber, American Photoengravers Assoc.; Donald B. Lytle, Lake Shore Electrotype Div.; Frank A. Freeman, Western Newspaper Union; Marvin C. Rogers, R. R. Don-

Attending Chicago Meeting of R&E Council

1—John V. Landau, Ralph B. Tufts; Frank DeWitt, Research Dept., Rochester Institute of Technology; Clark Hoagland.

2—Gilbert Stevens, sales representative, Minnesota & Ontario Paper Co., Minneapolis, Minn.; John L. Kronenberg, S. D. Warren Paper Co., Boston; J. Homer Winkler, technical advisor, Battelle Institute, Columbus, O.

3—Harry J. Van Ornum and J. N. Rager, Conkey Div., Rand McNally Co., Chicago; Dr. Marvin C. Rogers, R. R. Donnelley & Sons Co., Chicago; A. J. Powers, jr., Chemco Photoproducts, Inc.

4—Morris Kantrowitz, U. S. Government Printing Office; Warren L. Rhodes, head, Graphic Arts Research Div., Rochester Institute of Technology; Wayne Marcoullier, sales engineer, Goss Printing Press Co.

5—Richmond Maury, general manager, The William Byrd Press, Richmond, Va.; Bernard J. Taymans, general manager, Printing Industry of America, Inc., Washington, D. C.; Ray Spiller, vice president, Harris-Seybold Co.

6—Charles W. Pitkin, production manager, Doubleday & Co., Inc., New York, N. Y.; Earl Godshall, manager, Fotosetter Div., Intertype Corporation; Olin Freedman, printing engineer, Chicago; Ken T. Brouse, Knight Newspapers, Inc.

nelley & Sons Co., all of whom are from Chicago; A. B. Fry of Dow Chemical Co.; John V. Landau, Imperial Type Metal Co.; J. Homer Winkler, technical advisor, Battelle Institute, Columbus, O.; A. J. Powers, Jr., Chemco Photoproducts Co.

C. A. Mawicke, president, Pontiac Engraving and Electrotype Co., Chicago was chairman of the meeting. He was assisted by a panel of well known authorities in the relief platemaking field. (See accompanying illustration of panel members.)

Included in the exhibit were hand engravings on wood, linoleum, and rubber; photoengravings on zinc, copper, jem or brass, zinc alloys, magnesium and aluminum; dry or relief offset plates on copper and magnesium; electrotypes on 16 ga. metal mounted on wood and patent base; electrotypes laminated to an aluminum backing.

Also shown were copper duplicate electrotypes, plastic duplicate plates, hot and cold curved and centrifugally cast electrotypes, chrome face nickel types, flat and tubular curved stereotypes, molded rubber plates, synthetic 20-25 durometer rubber plates, rubber box printing dies and rubber design sleeves, gelatin relief plates and an emulsion plate on glass.

During the discussion period, someone asked how many impressions can be expected from curved nickel types. Elmer M. Schwartz, United Electrotype and Stereotype Co., Chicago, and who is also president of the Intl. Assoc. of Electrotypers and Stereotypers, replied: "From 500 thousand to 2 million press impressions, depending on conditions of the press, the pressure employed, rollers and the kind of paper.

The next question was related to whether or not it is correct to specify 133 line screen for the yellow plate and 120 line screen for other colors when ordering four color process work for high speed magazine plates. The second part of the question referred to the elimination of moire or pattern in the screens, as the result of using two different screens. The answer was that the specifications are correct but there is no guarantee that moire or pattern will not occur. Patterns, however, may be avoided by rotating the angle of the yellow and blue to coincide with each other.

When is it practical to use magnesium relief plates or to print directly from the type? was the next question. The reply was that the question is an economic one and varies from application to application within the platemaker's shop. One rule of thumb is that it is more economical to etch on magnesium when your production reaches 20 or more flats per shift. In newspaper production there is no question about magnesium engraving because of arbitrary publication deadlines.

Dr. Marvin C. Rogers, R. R. Donnelley & Sons Co., spoke enthusiastically in favor of magnesium printing plates. He said: "When the cost of magnesium plates is less than that for electrotypes, then it's time to change."

In answer to the question: How long should it take to produce deep etch magnesium plates for mat making?, the answer was: "From 2½ to 3 hrs. if the job is handled on a special or nonproduction basis."

Someone wanted to know if there is an advantage in chrome plating electrotypes over nickel plated electrotypes. John Davis, executive vice president, Judd & Detweiler, Washington, D. C., answered by stating that chrome plated electrotypes provide greater resistance to press batters.

Regarding the length of time required to make a magnesium plate of the food type of advertisement, this is a controversial subject. The answer, tentatively, is from 2 hrs. to 3 hrs.

(Continued on Page 106)

High Speed Letterpress Printing Discussed by Cottrell's Saunders

By H. DAVID McKINNEY*

**Asst. Professor of Printing Management, Carnegie Institute of Technology. Summary of address delivered by Staunton C. Saunders, vice president, The Cottrell Company, before Spring Management Conference, Carnegie Institute of Technology, Pittsburgh, Pa., April 1956.*

Staunton C. Saunders, vice president of The Cottrell Company, described the doubling and tripling of production speeds since the depression as "the greatest accomplishment in the whole letterpress industry." He illustrated this point with several dramatic examples of technological replacement:

A folding carton plant replaced 18 flatbed presses with six rotaries and "more than doubled its capacity in the printing plant with the same floor space because of the rapid turnover, and because these second and third runs through the same press don't have to be made."

Explaining that the new Cottrell box board press (Fig. 1) is simply another model of the former Cottrell publication press with improved feeder, separator, conveyors, front end, gripper system, and new delivery mechanism, Saunders pointed out that a comparatively few of these machines have been placed in 17 of the big tonnage boxboard houses, "replacing over 500 flatbed presses."

Approaching Automation

In the publication field, where the giant heat-set web presses have been getting steadily bigger and faster, the industry is gradually approaching "the great big push button, one-press factory." Even though it would be highly impractical ever to attempt to produce one of the giant weeklies on a single press, the technological replacement, over recent years, has been outstanding when it is seen that "the pressrooms that once had 70, 80, and 90 of the older presses, now get down to 4, 6, or 10 of the new ones."

The five-color magazine press (Fig. 2) which prints five colors one side, dries, turns over, backs up with five colors, slits, folds, and delivers folded signatures, can do so at a rate equivalent to producing 192,000 sheets (24 in. by 36 in.) per hr.

But with all the emphasis on speed, and with all the tremendous accomplishments made in this direction, speed must remain secondary to the application of craftsmanship and motion study if letterpress is to regain all the historical advantages it once had.

Makeready is Cost Problem

"The great cost problem in sheetfed letterpress," said Saunders, "is makeready. Time lost on letterpress equipment is a very serious deterrent, and it is obvious to everybody that this is so. . .but what we all are doing about it seems to vary considerably. . .some are still looking for innovations. . .but I think the application of thought and study and craftsmanship is the biggest thing."

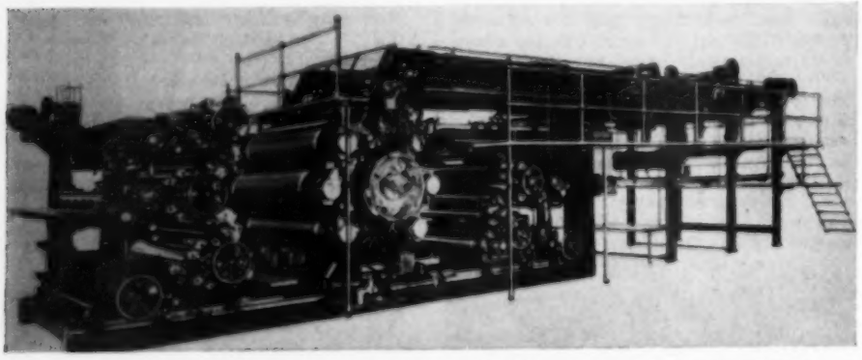


Fig. 1—View of Cottrell five-color box board letterpress with pneumatic throw-off and double delivery. Note that both inking units have been rolled away from the curved plate impression unit.

Saving By Sheeting

Citing several examples of the application of thought and study for the improvement of the process at Cottrell, Saunders described one of the newest developments: A roll feed device for standard sheetfed presses. This device takes rolled paper from the mill at a substantial saving, and sheets it to any size by an infinite variation of the length control. It delivers the sheets to the conveyor and front end of the standard sheetfed press, resulting in a webfed press with all the size characteristics of the standard sheetfed machine.

One of the exciting things about this device, according to Saunders, is that on presses with double delivery systems, "with the roll feed device, and the simple addition of a small Autopaster, you've got a completely continuous sheetfed machine."

The rollfeed device on a sheetfed press eliminates most of the curses, separation and feeding that normally go with sheet feeding, "because, when we are sheeting and laying them out in a stream, which we do, it is about an 80% overlap. We turn this stream over just as we do in a Cross or Christensen feeder, so you present to the front end a continuous stream on the conveyor just as though you were on a continuous feeder. We have eliminated all the separation troubles, most of the variation in sidelay troubles, so that we get very uniform feeding. Kickoffs are reduced tremendously below that of a normal sheetfed press."

Wrap Around Plate

One of the most talked about developments in the effort to make letterpress more competitive with offset in terms of cost and makeready, said Saunders, is the wrap around plate for "the letterpress printer who, for any reason whatever, wants to continue or has to continue with the letterpress

process, but is pressed hard by the economics of lithography."

The prospects, he said, are quite encouraging for this new development, the real problem being the very shallow undercut. Absolute accuracy seems to be the prerequisite, particularly in the form roller system, to prevent inking the dead metal which is only 0.010 in. to 0.014 in. deep. "Consequently, we have found methods of doing this. . .we can make big and hard and stiff form rollers that are adjustable enough, accurate enough, so we can ink the plate which in turn is ground on gravure shell grinders to 0.0005 in. tolerance."

Wrap Around Plate Progress

According to Saunders, Cottrell is proceeding with development of the wrap around plate because, when the process is totally successful "the letterpress printer with rotary equipment will have a foundation that is perhaps two or three times as broad as it is today in terms of length of run and cost of plates and makeready. Up to the exposure in the vacuum frame it is the same thing as photolithography; then you either develop the plate lithographically or you etch it chemically for a letterpress plate."

Tension Plate Lockup

Another of the interesting "little things" Saunders described, is the use of tension lockup. The basic difference between tension lockup and the more conventional compression lockup is that the plate is pulled into place rather than being pushed, making it possible to fit a plate which is slightly inaccurate in curve, eliminating breathing and slapping which cause crystallization and fatigue—the basic reason for throwing plates.

Under the tension lockup method torque wrenches are used for equalizing tension on the hooks. Without torque wrenches it is a rather common thing to apply four to five times as much load on one hook as on another, resulting in metal fatigue which leads to plate fracture—and trouble.

Method for Makeready Reduction

In outlining a method which has reduced makeready on the giant five color presses by as much as 15 hrs. to 20 hrs., Saunders said: "One of the most ingenious and one of the simplest improvements I know of is in use in several plants, the method is as follows:

"Instead of using the press as a proof press, and as a work bench on which to perform lineup and registering operations, these printers have a drafting table in the pre-makeready department where a draftsman makes the imposition on a sheet of paper of correct thickness and characteristics to serve as an underlay sheet.

PIA Dedicates New Building August 9—Printing Industry of America, Inc. has moved to its new quarters, 5728 Connecticut Ave., N.W., Washington 15, D. C. The building, designed in Colonial Williamsburg style, represents an investment of over one-quarter million dollars with more than $175,000 already having been paid or subscribed. The 10,000 sq. ft. of air conditioned space includes a board room where many industry meetings will be held. In the lobby there will be a permanent record of individuals, companies and associations whose subscriptions made the headquarters possible. Located in the building with PIA is the Research and Engineering Council, the Education Council and the Intl. Graphic Arts Education Assoc. Headquarters will be officially dedicated on August 9. PIA will hold open house all day, with the Graphic Arts Assoc. of Washington, D. C. acting as hosts. Elmer G. Voigt, chairman of the Properties Management Committee, stated that PIA's operating effectiveness will be increased by bringing all of its Washington operations under one roof.

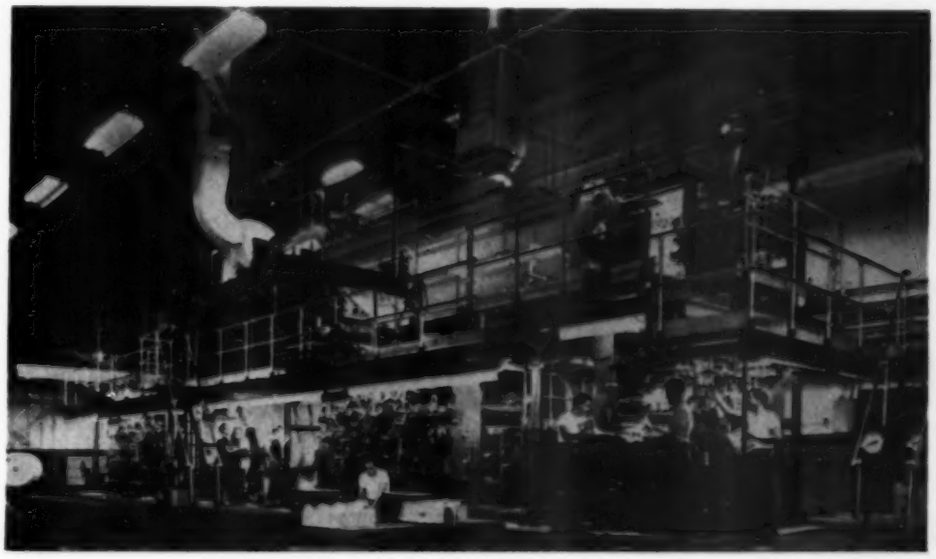


Fig. 2—View of Cottrell custom 40 page double five-color magazine letterpress with jaw folder equipped with Offen ink driers.

"Over the imposition, on the drawing board, the draftsman superimposes an acetate sheet which is a master layout of the plate cylinder, showing all necessary details of the cylinder surface, including location of grooves and hooks. Looking at the imposition through the transparent overlay he can see where the hooks must be positioned, and punches a hole through the paper for each hook, adjacent to the plate outline drawn on the paper.

"The paper is wrapped around the plate cylinder and fastened with cellulose tape, becoming the underlay as well as the positioning sheet. The plates are laid directly over the outlines drawn on the imposition; the hooks are dropped through the pre-punched holes, and brought into immediate lock on the plate."

Saving in Man Hours

The most difficult part of this simple, ingenious new method, according to Saunders, is getting everybody to use it—getting everybody to understand it isn't the simplest thing in the world because in this industry tradition means so much.

"Skill and craftsmanship and ingenuity and motion study," said Saunders, "are more important than speed, more important than startling new innovations by the equipment manufacturers. We believe the use of better education on our part (the equipment manufacturers) to teach skill and know-how for the printers to pass around among themselves would, if accepted and applied, cut hundreds of thousands of man hours out of the cost of letterpress printing in this country."

Flexographic Printing

By MR. FLEXOGRAPHY

I.—ARE YOU BLOCKING A GOOD JOB?

(A discussion of the problem of ink films adhering to the underside of the web.)

The four color print was running beautifully—each color clear, opaque, fine gloss, and trapping well. You were pleased with your pressman's setup and checked the rewind for ruboff. Being satisfied all along the line, you cut out some prints from the web to check against your standard. These you OKd and laid aside for later adhesion, scratch, scuffing and flaking tests. An hour later, you knew that seldom had a report been so good on all counts.

It was the next day when the blow came—you could hardly believe it possible. But there it was—right before your eyes. You could not unwind a foot of the printed roll that wasn't blocked by the ink film being picked off on the underside of the sheet above. Such a wonderful looking job—yesterday—and today, the four colors are spread all over the web! What could possibly have happened? It checked perfectly.

EDITOR'S NOTE:

This is the first of a series of articles by a printing consultant to flexographic printers. Your own printing problems will be answered by writing to Mr. Flexography, in care of Editor, *Printing Equipment Engineer*, 1276 West Third St., Cleveland 13.

To detect the cause of this blocking in the printed roll, a series of elimination checks must be made for:

(1.) Insufficient heat on press.
(2.) Insufficient air on press.
(3.) Slow drying solvents in ink.
(4.) Solvents trapped in rewind.
(5.) High plasticizer on printing surface.
(6.) Insufficient solvent in ink—or too much binder in proportion to solvent.
(7) Improper selection of resins in ink.
(8.) Too heavy an ink film.
(9.) Too tight a rewind roll.

Certainly the tests made during the press run on the prints culled from the web would *at that point* eliminate Nos. 1, 2, 3, 5, 6 and 8. Of the three remaining, there would be very little effect by a roll wound too tightly if there were not any trapped solvent. Therefore, the possibility that a condition of trapped solvent exists or wrong resins used should be thoroughly investigated.

For the next step (a) Unwind the printed roll to a depth of six or seven layers or to a point where blocking is evident. (b) Cut out a section of the web and subject the printed surface to both a strong blast of heat and forced air and set aside on a work bench. (c) At the end of one hour, test in the same manner as you did the sample from the web during the press run. If your trouble is at an end, you may conclude that it was caused primarily by the solvent being trapped in the roll.

What To Do? (a) Increase the heat on the press; (b) Get more forced air onto the web, making sure the solvent-polluted air is being properly exhausted; (c) Use a quicker evaporating solvent; (d) Use as much solvent as good color will allow; (e) Use a talc on the web; (f) Print a thinner ink film.

From this second run, place three samples together in the following manner: (1) Print to print; (2) Printed area to plain area; (3) Plain area to plain area. Leave a 1 lb. weight per sq. in. on each sample for 24 hrs. at 110 deg. F. If the blocking still persists, the resins in the ink formulation should be thoroughly checked for solvent release rate. Naturally, if this manner of testing (the 1 lb. weight) was made on the initial press run, your ink supplier and yourself would be much better informed at the start of your second run.

The question has been raised many times whether a so-called hard or soft varnish will enhance or deter blocking. The answer is both *Yes* and *No*—and be assured that your ink chemist will select the best vehicle for your job. It is sufficient to note here that the hard varnish will not arrive at its ultimate hardness until *all* the solvent has been expunged; it may be looked upon as a soft varnish until that time. The soft varnish will be just as block-resistant when completely free of solvent.

Just when to call your ink supplier is up to you, but since it is his product and your time and money, you can work *together* for a quicker solution.

Electronic Counter

The Electronic Products Div., Post Machinery Co., recently announced an electronic counter. The unit is a MC Multi-Channel Input Counter which enables placement of separate photoheads at each of the presses where output is to be monitored. At each break of the photo beam a pulse is recorded which is relayed to the counter. Should the photoheads be interrupted simultaneously the count will still remain accurate, due to the anti-coincidence feature of the unit. The Model MC is also adaptable to accumulating product information where several sources of the products are involved, such as a news printing operation where several presses are printing the same material. Solenoids can be incorporated to move certain units out of line for visual tally. The counter is also effective in measuring total footage when the product is in web form and is manufactured or processed on several similar machines. For further details, please mention PEE No. 182 in your request.

Uses of Electronics In Graphic Arts Industry

By FRANCIS A. WESTBROOK

PART VII.—

SPRINGDALE SCANNER RCA COLOR CORRECTOR

An interesting electronic device of much practical value has been developed by Springdale Laboratories, Div. of Time, Incorporated. It is known as the Springdale Scanner. This is a color separating machine which is technically and commercially successful in both lithographic and letterpress work.

This machine is not available for sale or lease, but a Scanner Studio has been set up in Stamford, Conn. by Printing Developments, Inc., which is a wholly owned subsidiary of Time, Incorporated, and the marketing agency for Springdale Laboratories Div. The organization is selling Scanner service at the Studio. So far, the services rendered are limited, because the market now being reached is limited in proportion to the capacity of this one machine to produce. However, additional machines are planned for 1956 to increase the availability of the service to the trade.

Basically, the Springdale Scanner scans color transparencies and simultaneously exposes a set of continuous tone separation negatives. These four negatives are developed under very close tolerances and then are delivered to the customer. The customer uses the negatives in the preparation of letterpress engravings or lithographic plates by means of controlled post-scanning techniques. The Scanner has been used in the preparation of editorial copy for Time publications for the past few years.

The Springdale Scanner consists of an electronic computer and optical instrument designed to work from transparency copy and produce negatives of the same size as the copy for use in letterpress and offset process color printing. The machine, shown in Fig. 25, is 9 ft. long by 6 ft. high by 2 ft. deep and consumes about the same amount of power as an electric iron. The scanning field is large enough for one 8 in. by 10 in. transparency or a group of smaller ones which will fit into that area.

RCA Explains Color Corrector Status

(This statement was released to the Graphic Arts Industry at the Annual Meeting of the Technical Assoc. of the Graphic Arts, Inc., Chicago, May 7-9, by J. E. Odell, Radio Corporation of America.)

"In view of the high industry interest in the RCA Color Corrector over the past years, we feel that it is only fair that a statement of its present status be made.

"On Feb. 15, R. R. Donnelley & Sons Co., Chicago, entered into an agreement with RCA under which Donnelley will support the engineering program in Camden for some months, at the end of which time one of the prototype all-electronic equipments will be installed in the Donnelley plant in Chicago for a year's trial.

"For the present, RCA activity on the project will be limited to the support of this program."

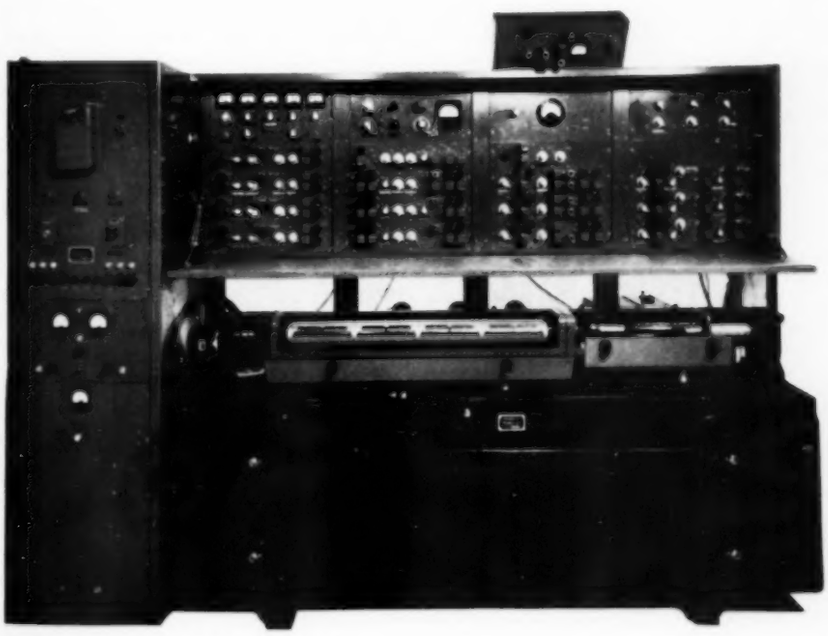


Fig. 25—Springdale photoelectric scanner.

The copy holder of the machine is a drum of clear glass. (Fig. 26) Four sheets of sensitized film are placed on a spindle with four glow lamps, as seen in Fig. 27. This is done with the room dark, after which the covers are closed and the lights turned on for operation of the scanner. This operation requires about 10 min. The latter works on an area about the size of a pin point and produces all four color separations simultaneously.

A ray of light is directed into a glass drum, Figure 26, through a periscope which directs the light through the colored transparency which converts it into a colored beam. This enters an optical system which "separates" it into three primary colors, each of which is transformed by an electric eye into an electric current. The strength

of these currents is dependent on the intensity of the individual color at the point being scanned, and the three electric currents then each pass through four electronic correction steps.

In Fig. 25 the panel at the right of the machine is the compressor panel which balances the ranges of the three signals emanating from yellow, the red and the blue photo tubes. By interrelating the three electric currents corresponding to the three "separated" colors, a form of electronic masking is produced. This operation is performed in the second panel from the right.

With the Springdale Scanner, the black plate is made from the information derived from the electric currents which are a function of the amount of yellow, magenta and cyan dyes present in the area in focus. This technique is superior to adding a black printer prepared photographically. In most four color printing processes, the amount of colored inks must be reduced in areas where black ink requirements are high. Such removal of undercolor is important with high speed wet printing to produce quality reproduction. The controls in the third panel from the right in Fig. 25 provide for the simultaneous black printer computation and corresponding undercolor removal computation.

Since the Scanner examines and corrects each pin point separately, it simultaneously records each area on the yellow, magenta, cyan and black negatives. Each revolution of the synchronized drum and cylinder scans and records the proper color information along one line of the color transparency, and as each revolution is completed, the mechanism moves horizontally to scan the next line. The scanning lines are spaced close together so that the result is a set of continuous tone separation negatives. After screening and other processing steps, the scanning lines are completely invisible.

The glow lamps seen in Figure 27 convert the electrical impulses into light beams or rays to which the films are exposed. They are controlled by the printer at the extreme lefthand panel of Fig. 25 and stabilized currents are sent to them.

This completes the work of the machine, and it only remains to develop the exposed film by standard procedures in the darkroom. Processing of the scanned negatives must be accurately controlled to keep all the advantages of the electronic color separation and undercolor removal. After this, the negatives are ready for processing into printing plates.

The operator of this electronic machine can produce color separations of improved quality in less tim, but the skill and experience of the craftsman still are necessary.

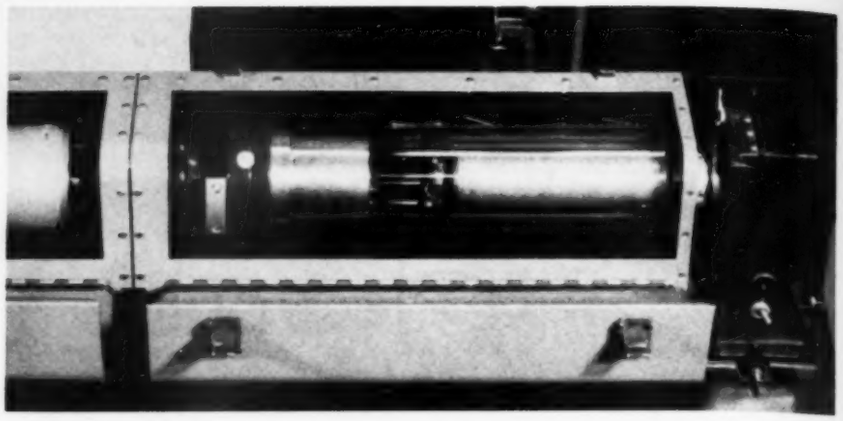


Fig. 26—View of Springdale scanner rotating copy holding drum. The drum is clear glass. The color transparency is mounted on the periphery of the drum. Also shown at right side of instrument in Fig. 25.

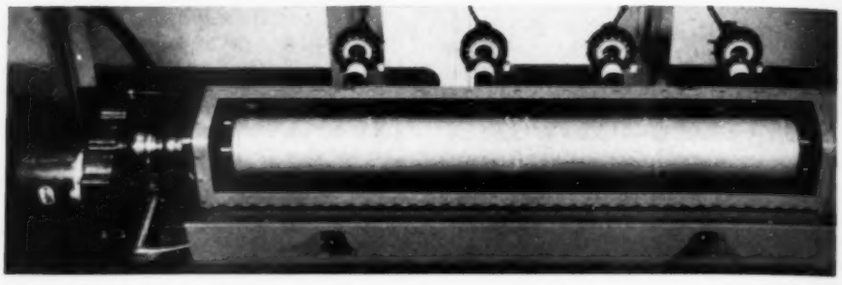


Fig. 27—Rotating spindle of Springdale scanner (also shown at left in Fig. 25) with the four glow lamps.

The RCA Color Corrector is still under development. In Fig. 28 it gives an idea of about what the equipment will look like. An operator is seated in front of the computer console with the optical controls at his right. Briefly, the operation consists of placing three tri-color filter separations of the subject to be reproduced in color in the machine. These three separations are electronically and simultaneously scanned. The corresponding signals produced by the scanner are sent to the computer which generates four signals, one for each ink color, namely, cyan, magenta, yellow and black. These signals vary automatically in color and tone value and enable the four inks and the paper to reproduce the original accurately by making four corrected continuous tone negatives on glass. Scanning takes about 10 min. for each of the four inks, or a total of about 40 min. for the whole job. The size of the image may be varied from about

(*Continued on Page* 99)

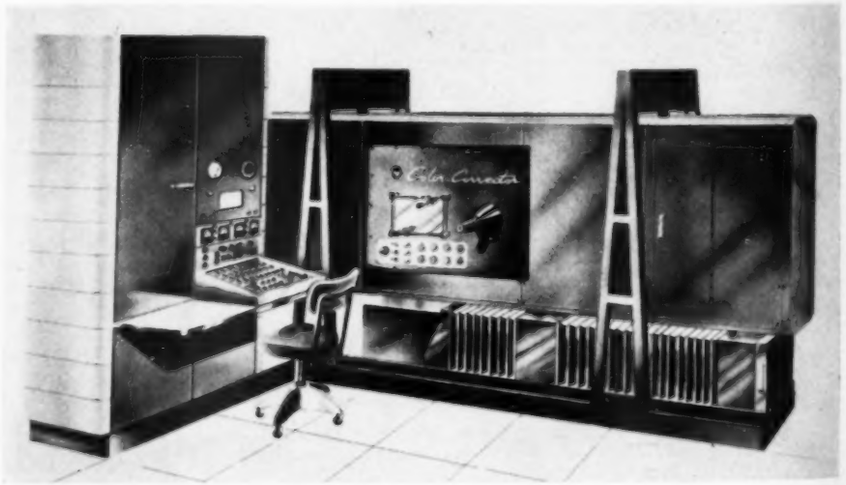


Fig. 28—View of RCA Color Corrector in which optical, mechanical, electronic and photographic operations are employed to produce color separations. Equipment produces four color corrected continuous tone negatives on glass.

Officers Elected At ATA Meeting

Anthony Perrusi, Advertising Agencies Service Co., Inc., was re-elected chairman of the Advertising Typographers Assoc. of America, Inc., New York Group, at the annual meeting and golf outing June 19 at the Leewood Golf Club, Crestwood, N. Y.

Other officers, all re-elected, are: Jack Miller, Kurt H. Volk, Inc., and Frederic N. Phillips, jr., Frederic Nelson Phillips, Inc., vice chairmen; and Mrs. E. W. Shaefer, Tri-Arts Press, Inc., treasurer.

Newly elected members of the executive committee are: Milton Chartrand, Associated Typographers, Inc., and Harry Silverstein, Harry Silverstein, Inc. Members continuing for another year are: A. Applebaum, Artintype, Inc.; Harry J. Lattmann, Chris F. Olsen; and Bernard M. Ryan, The Typographic Service Co.

For the second consecutive year Robert Schmidt, Frederick W. Schmidt, Inc., won the golf trophy in the annual tournament. Anthony Perrusi won the low gross prize.

Among the guests at the annual meeting were the following officers of the Advertising Typographers Assoc. of America, Inc., with which the New York Group is affiliated: Walter T. Armstrong, Walter T. Armstrong, Inc., president; Harvey Willens, George Willens & Co., Detroit, vice president; and Carl H. Ford, the J. W. Ford Co., Cincinnati, immediate past president.

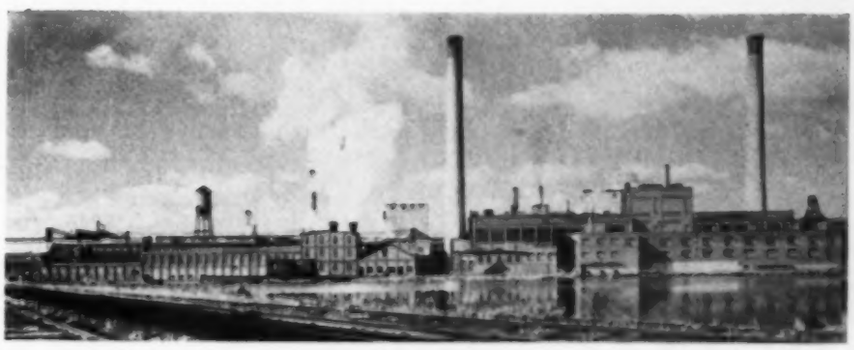
Seminars for Management

Stereotype and pressroom operation management seminars, sponsored by the Institute of Newspaper Operations, Inc., will be held at the Drake Hotel, Chicago, Aug. 20 to 24. This is the first time the complete two day stereotype program, arranged in seminar form, has been presented in connection with a press seminar. The seminars are primarily for the newspaper staff and management personnel who have not been trained in the pressroom or in stereotyping activities. Program for the stereotype seminar, Aug. 20 and 21, will include a technical background of stereotyping, the INO engineering analysis, molding and processing of curved plates, casting, r.o.p. color and flat casting. The pressroom seminar will include background of rotary press design, paper supply and control systems, press drive and inking system, webbing and web control, positioning of plates and others.

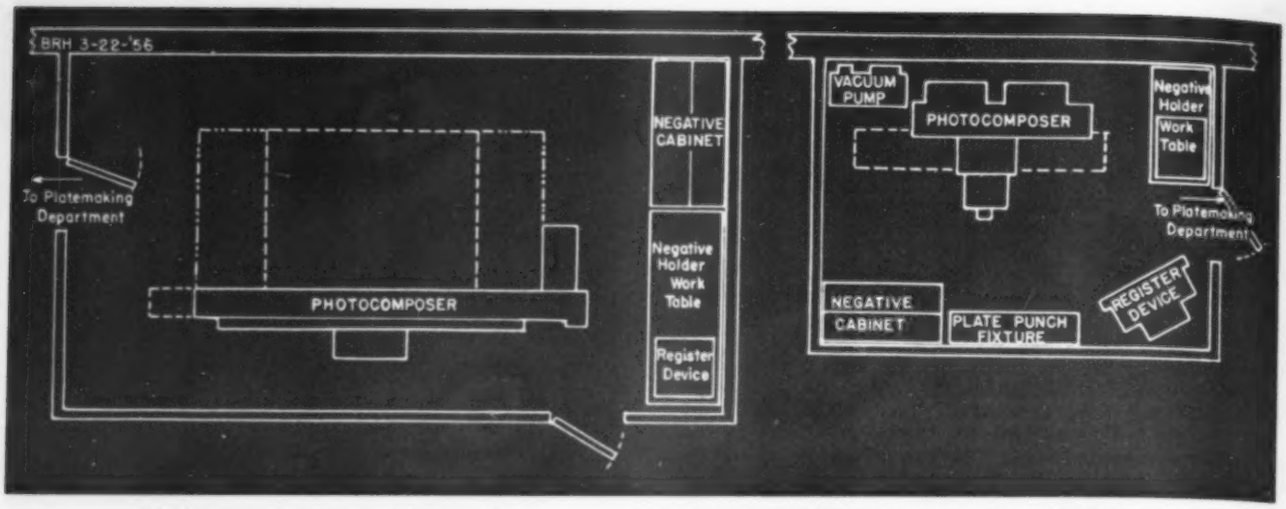
For registration details write to Institute of Newspaper Operations, Inc., 140 S. Dearborn St., Chicago 3.

Harrison Corporation Expands—The D. L. Harrison Corp. has leased an additional 10,300 sq. ft. at 122 Howell St. in the Dallas, Tex., Trinity Industrial District. The company also authorized Garrett & Company, Inc. to underwrite 100,000 shares of common stock to finance expanded production. Shop space at 3923 Elm St. was no longer adequate, D. L. Harrison, president, said. The Harrison Corporation expects to increase production from its present press a month rate to some 50 presses a year, Edmond Brown, vice president of Garrett, and D. L. Harrison said in a joint statement recently. George Sanberg, an associate of Garrett & Company, Inc., investment bankers, has been elected a director of the Harrison Corporation. Funds from sale of stock will be used by the Harrison firm to buy additional machinery and equipment and to increase raw material inventory. The firm manufactures Harrison Variable Size Rotary Presses and Collators. The company's newest achievement is a combination variable size rubber plate and offset press, which can be used for either printing process.

Unique Printers Move—When Unique Printers and Lithographers moved into its new plant at 5500 W. 31st St., Chicago, it was the fourth such move in its 25 yrs. of business. The firm also recently completed the installation of a new Miehle 29 Offset Press, manufactured by Miehle Printing Press & Mfg. Co. The new building is air conditioned, with controls for both temperature and humidity. The floor is maple strip laid over concrete. Since a large percentage of its work is the production of advertising pieces in color, Joseph B. Semrad, owner, has planned equipment in pairs. He operates two Miehle Verticals in the letterpress department, and the new Miehle 29 will give him a pair of offsets. Pictured discussing the new 29 are (left to right): Semrad, Floyd Deets, plant superintendent, and W. K. Gordon of Miehle.



New York and Penn Adds Fourdrinier—A Fourdrinier machine will be installed at the Lock Haven, Pa., mill of New York & Pennsylvania Co., it was announced recently by Peter S. Paine, New York and Penn's president. It is expected that the machine will be in production by early next year. The expected daily capacity for the machine running at 650 ft. per min. is 100,000 lbs. Primarily intended for the production of offset paper, the machine's 108 in. trim will turn out paper to suit requirements of printers using 52 in. presses.



Photocomposer Type A Layout *Photocomposer Type B Layout*

Typical Photocomposer Floor Plan Layouts

Will It Be

Stripping or Photocomposing?

By BERNARD R. HALPERN

The choice of a particular lineup table or photocomposer must be carefully considered, just as with the choice between methods. Some machines are more accurate in positioning for location. Others afford accurate color register between plates even though the positioning location may not be precise. One make of machine can withstand more abuse in handling and has less down-time. Another may require careful handling if misregister is to be avoided. Some designs are more efficient and productive than others. And occasionally the available extras in exposure controls, pre-positioning mechanisms, and facilities for multiple negative preparation may be the deciding factor.

The degree of precision in equipment must be paid for, just as for the accuracy and quality of a printing job. Accordingly an important consideration is the maximum accuracy required by the large bulk of work. Of corresponding importance is the availability of nearby quality trade plants. If only a small percentage of jobs require accurate register or precise location, it will usually be more profitable to equip for the bulk of the work, leaving the high-accuracy jobs and the peak load overflow to be handled by a good trade shop.

Like everything else in printing, cost and quality must be balanced with each other to bid effectively and bring jobs into the house. The same degree of business acumen and competitive estimating is necessary for deciding on the plant methods and equipment you will use.

The printing plant entering into offset, as well as the established lithographic plant, may require either or both of these facilities. The plant executive must not only decide which method and equipment installation is best suited to his needs, but he must also evaluate each job to choose the best method for platemaking. Often a few additional facts may swing the decision the other way, and accordingly a better understanding of these methods is desirable.

The object of both stripping and photocomposing is to locate the printing subjects on the pressplate with the degree of accuracy required by each job. In stripping, the actual exposure of the pressplate follows completion of the flat. In photocomposing, the positioning and exposure of the pressplate are concurrent.

The number and sizes of the presses, the annual volume of work, or the space and capital available, are not in themselves adequate criteria for deciding between stripping and photocomposing. More important is the nature of the work being done, and the division of this work in relation to its accuracy and layout requirements. Some of the basic factors to consider are:

A. *Cost.* Are combination or step-and-repeat runs more economical? Combination jobs permit longer press runs, but they must be balanced with each other in quantity, ink colors, paper stock, grain direction, delivery schedule, etc. This in turn will hinge on the minimum expected life of a set of pressplates. Obviously, labels and similar forms re-

quired in millions are a natural for the photocomposer. Similarly, advertising brochures, tariff schedules, and direct mail pieces favor stripping practices. In between is a large volume of work that can be done by either method. As the margin of profit in the printing industry is relatively low, the choice of method will have an important effect on the financial balance at the end of the year.

B. *Positioning Accuracy.* Increased accuracy usually means increased cost. This increase may be either for equipment or time put on the job. The nature of the job usually determines the minimum accuracy and cost that is acceptable for the quality standard specified. To lessen accuracy standards cheapens the appearance of the product and may result in loss of a customer. To increase accuracy beyond its needs, may price the job out of competition. The high accuracy jobs such as crown caps, tin printing, playing cards and stamps require the use of a photocomposer because of the associated progressive stamping, die-cutting or forming operations. The usual run of commercial color work is suitable for the accuracy provided by a good line-up table and a careful stripper. With the increasing trends towards plant humidity control or air conditioning, the difficulties that formerly favored photocomposing or necessitated stripping on to glass are no longer as important. Even where humidity control is not available, low-shrink photographic materials, and plastic sheets for flats, can satisfy the requirements of the more accurate jobs.

C. *Color Accuracy.* Here, surprisingly enough, increased equipment cost does not insure better color fidelity in reproduction. Press plates made on a photocomposer take time, that may frequently be an hour or longer. During this time the sensitivity of the coating may change due to dark reaction and other factors. This can result in a gradual change of dot size and color value, particularly if soft or fringed dots are present in the negative or positive. In addition, the close position of the arc lamp, located in its design to reduce exposure time, tends to overexpose the center or underexpose the margins of each subject. This exposure variation distorts the color values within the job itself, and becomes more noticeable in the larger subject sizes. The arc lamp reflector or housing is also close enough to cause harmful undercutting in slightly out-of-contact areas. Such out-of-contact may be caused by the photocomposer itself due to vacuum embossing of the press-plate, or may arise from heavy masking, kinks or dirt specks. The result is a local enlargement of dots from negatives or a sharpening or loss of dots from positives. These exposure and resulting color variations are less noticeable in pressplates made in the vacuum frame because the longer exposure time required for the increased arc lamp distance can be tolerated. However, such difficulties can also occur in a vacuum frame if the lamp is brought too close or if multiple arc lamps are used for exposure.

To aid in balancing the various factors against each other in arriving at a decision, a check list for consideration follows:

STRIPPING

ADVANTAGES:

1. Minimum platemaking time.
2. Minimum press-down-time when plate replacement is necessary.
3. Layout and appearance of complete job can be readily checked from the flat or brownprint.
4. Overall plate exposure is more uniform.
5. Lower initial investment.
6. Lower overall cost for average combination job.

DISADVANTAGES:

1. Errors in accuracy are likely due to humidity variations, or to distortions in attaching films to flat.
2. Flats are awkward to handle, strip, and store, and so are conducive to film injuries.
3. Insufficient accuracy for precise positioning and register jobs.
4. Requires supply of duplicate negatives or positives in quantity to strip up a step-and-repeat job.
5. Total floor space requirements usually greater for equivalent productive capacity.

PHOTOCOMPOSING

ADVANTAGES:

1. Provides highest positioning accuracy in platemaking.
2. Step-and-repeat prints are identical in detail (other than dark-reaction factor), as the same negative or positive is used.
3. Doubleprint accuracy, such as in combining line and halftone detail, is noticeably better.

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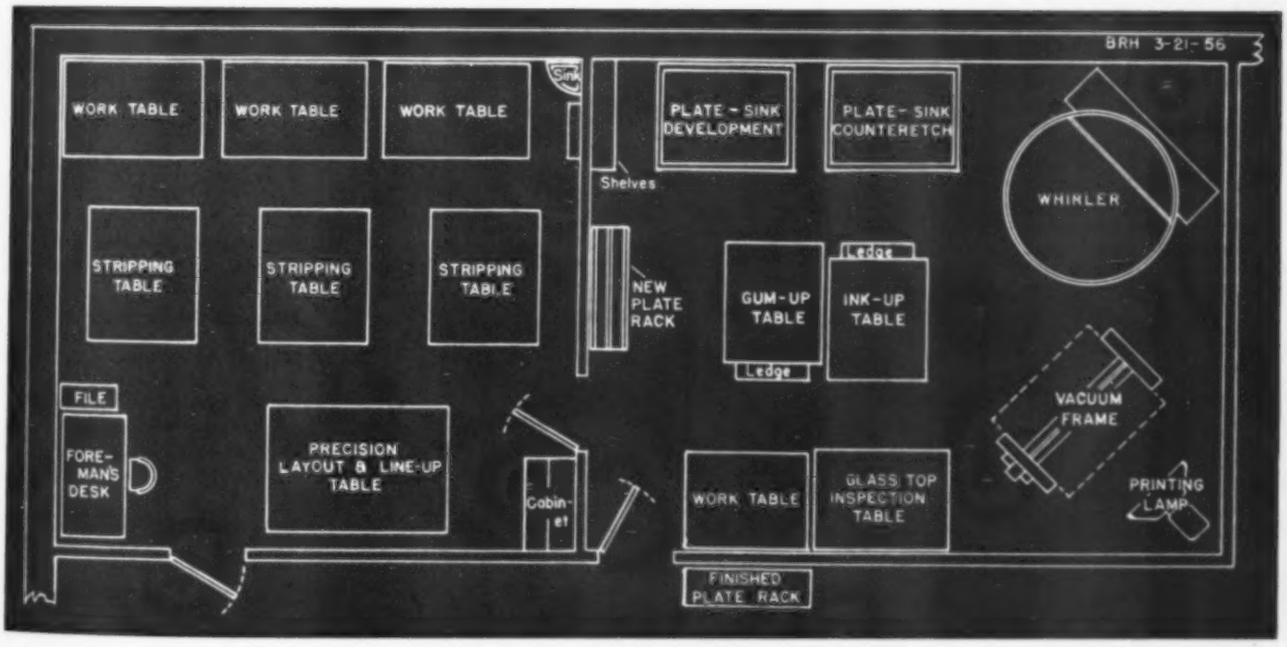

Typical Stripping and Platemaking Department

R&EC Executive Committee Meets in Washington, D. C.

Meeting on June 14 in Washington, D. C., the Executive Committee of the Research and Engineering Council reorganized the active structure of its members and designated chairmen from among its members to carry out five major Council objectives. These are named and defined in the accompanying report. Participating in this important meeting were: Front Row Seated: left to right—C. L. Jewett, Minnesota Mining & Mfg. Co., St. Paul, Minn.; Alan S. Holliday, Craftsmen, Inc., Kutztown, Pa., Council secretary; Helen Fisher, assistant to managing director; George H. Cornelius, jr., Cornelius Printing Co., Indianapolis, Ind., second vice president; Dr. William C. Walker, West Va. Pulp and Paper Co., Williamsburg, Pa.; Robert E. Rossell, managing director; C. M. Flint, Chas. T. Main, Inc.; Felton Colwell, The Colwell Press, Inc., Minneapolis, Minn., Council president; W. R. Spiller, Harris-Seybold Co., treasurer; S. F. Chernoble, The Comet Press, Inc., New York, N. Y., first vice president; Edward J. Triebe, Kingsport Press, Inc., Kingsport, Tenn.; Gilbert Stevens, Minnesota & Ontario Paper Co., Minneapolis, Minn.

Standing left to right—John L. Kronenberg, S. D. Warren Co., Boston; Bernard J. Taymans, Printing Industry of America, Inc., Washington, D. C.; Wade E. Griswold, Lithographic Technical Foundation, New York, N. Y., Kenneth R. Burchard, Carnegie Institute of Technology, Pittsburgh, Pa.; L. N. Cormain, Herbick & Held Printing Co., Pittsburgh, Pa.; Fred P. Hofferth, American Book Co., Cincinnati, O.; Walter T. Flower, Flower Steel Electrotype Co., Inc., New York, N. Y.; Robert H. Downie, Marathon Corporation, Menasha, Wis.; John H. Davis, jr., Judd & Detweiler, Inc., Washington, D. C.; Lee Augustine, The Printing Machinery Co., Cincinnati, O.; Morris S. Kantrowitz, U. S. Government Printing Office, Washington, D. C., and J. Homer Winkler, Battelle Memorial Institute, Columbus, O.

Council Adopts Concrete Objectives

One of the highlights of the 1956-1957 Executive Committee meeting of the Research and Engineering Council of the Graphic Arts Industry, Inc., June 14, Washington, D. C., was the acceptance and approval of the report of Dr. C. L. Jewett. Jewett is associated with Minnesota Mining & Mfg. Co. He is Council's chairman of the Committee on Committees, to consider the problem of making the Council more effective in carrying out its objectives.

Briefly, these objectives are as follows: (1) To survey the needs of the Graphic Arts Industry; (2) to stimulate research and development by those best qualified; (3) to summarize and present the results of such studies to the membership.

Jewett said this work can best be done by committees made up of interested and active individuals so organized that each committee is responsible for a definite area of interest within the industry. The procedure to accomplish this was outlined as follows: (1) The work of the Council will be divided into departments represented by committees and subcommittees as required; (2) Each committee will be made up of individuals having particular competence in the specific field represented by the committee, and (3) Each committee will be headed by a chairman who will be responsible for the activity of the committee and its reports.

Council Objectives

Rearranged Council objectives are to survey the needs of the Graphic Arts Industry and to collect, develop and disseminate research and engineering data pertaining to materials, methods and equipment which will ultimately lead to the production of a better printed product at lower cost.

Scope of Each Committee

To accomplish these objectives, the following committees and the

Cleveland Litho Institute Graduates 120 Students—The second year of educational activities was observed by Cleveland Lithographic Institute with graduation excercises held on June 6. Certificates of Accomplishment were awarded 120 students who had completed courses in layout and stripping, dot etching, platemaking, pressmanship, and survey of lithography. Harry A. Porter, shown at right, senior vice president of the Harris Seybold Co. and a member of the Institute Board of Directors, delivered the principal address. At left is Fred A. Merrick, Merrick Lithograph Co., president of Cleveland Lithographic Institute. Cleveland Lithographic Institute was organized in July, 1954, and the lithographic classes were started at Fenn College with an enrollment of 72 students. During the second full year (32 weeks) of operation enrollment increased to 123 students of which number there were 120 graduates.

Candidates for Memberships to Intl. Board of Governors Intl. Assoc. of Printing House Craftsmen, Inc. (Three to be elected)

COOPER

FAUNCE

HENDRICKSON

LARSON

MATSON

Thomas L. (Tom) Cooper is the unanimous choice of the Seventh District for Intl. Board of Governors. Tom is a leader and organizer and has the time to do the job, say his backers. Twice president of the Southeastern Engravers Assoc., he's a member of the Board of the National Engravers Assoc. He's president, Southern Photo Process Engraving Co., Atlanta.

Harry M. Faunce for Intl. Board of Governors has the call of one and all in the First District. Harry is quite a guy when measured by sincerity and ability and he can contribute a lot to International Craftsmanship, his supporters say. He's past president of the Boston Club. An ex-compositor and pressman, he is now sales engineer, The Rumford Press in Boston.

Paul (Mooney) Hendrickson is the nominee of each and every Craftsman in the Fourth District for Intl. Board of Governors. Mooney's experience and keen interest are main planks in his platform. He's been president of the York Club and has served three terms as district representative. Mooney is executive vice president of Pennsylvania Electrotype Co., York, Pa.

Floyd C. Larson is first choice of the Sixth District for Intl. Board of Governors. Floyd needs no introduction to any Craftsman after his highly effective efforts as Intl. Printing Week Chairman. He has the drive and know-how to make just as large a contribution on the Intl. Board. Floyd is director of the U. S. Navy Printing Office at Great Lakes, Illinois.

Gordon T. Matson is the unanimous nominee of the Twelfth District for Intl. Board of Governors. Combining the open friendliness of the Far West with the experience of many years in the meticulous, demanding trade composition field results in a man uniquely equipped to make a special contribution to the Intl. Board. He owns the Modern Typesetting Co., Los Angeles, Calif.

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function of each, together with the chairman, were approved unanimously:

Composition (Alan S. Holliday, Chairman)

Scope: All materials, methods and equipment necessary and essential to prepare copy for photographing and type forms for printing. (This includes all operations from sketches, layouts and copy to reproduction materials suitable for photographing, plating or printing.)

Photomechanics and Platemaking (Dr. Marvin C. Rogers, Chairman)

Scope: All materials, methods and equipment necessary and essential to prepare plates, cylinders, stencils either as originals or duplicates from copy suitable for photographing, type forms or original plates to accomplish: commercial, newspaper, publication or specialty intaglio, offset lithography, collotype, screen process, flexographic, relief offset or letterpress printing in single or multicolor printing on platen cylinder or rotary presses either hand, sheet or web-fed.

Printing (Dr. William C. Walker, Chairman)

Scope: All materials, methods and equipment necessary and essential to accomplish: commercial, newspaper, publication or specialty printing by the intaglio, offset lithography, collotype, screen process, flexographic, relief offset, or letterpress method in single or multicolor printing on platen, cylinder or rotary presses either hand, sheet or web-fed. This includes screens, makeready, presswork, ink, stock, rollers, register, tone control, etc., but not composition, plates or stencils.

Binding and Finishing (E. J. Triebe, Chairman)

Scope: All materials, methods and equipment necessary and essential to perform the binding and finishing operations required in the production of commercial printing, newspapers, publications, books, forms.

Engineering and Materials Handling (C. M. Flint, Chairman)

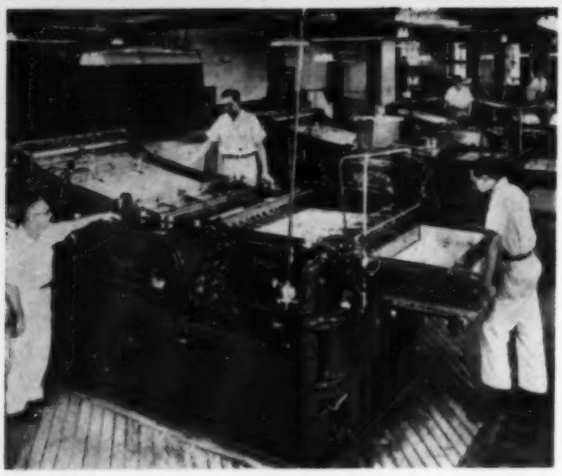
Scope: All in-plant methods, materials and equipment necessary and essential to support and maintain an efficient printing plant.

Litho School Courses

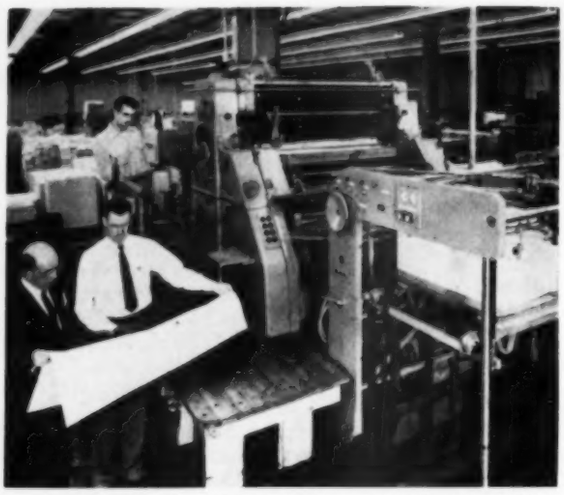
The Chicago Lithographic Institute is offering a wide range of courses in all phases of lithographic production. In Vol. III—1956-57, course outlines in photography, litho art, stripping, platemaking, presswork, estimating, chemistry of lithography, and an evening intensive course in lithography, are listed in the school's catalog. J. Armitage is the president of the board of directors and F. Oehme, is executive director of the institution. Besides Oehme, there are 27 members in the administrative and teaching staff. P. Hartsuch teaches the chemistry course.

The Chicago Lithographic Institute's quarters contain approx. 5000 sq. ft. of floor space. Equipment includes process cameras, viewing tables, dot etch tables, stripping tables, a two-color press, two one-color presses, a paper cutter, a photo composing machine, plus many other machines. All classes are held in a modern building with fluorescent lighting and air conditioning throughout.

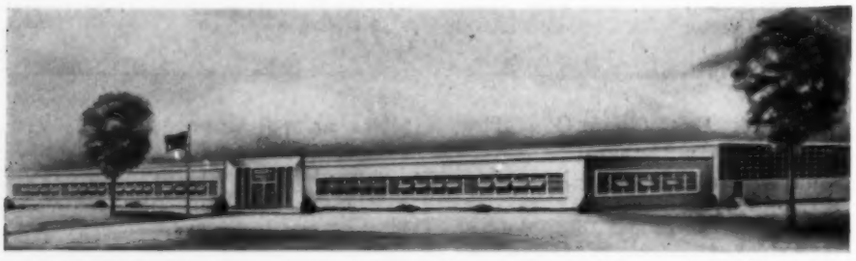
The Institute is located at 1611 West Adams St., Chicago, Ill.



Largest Miller Order—Completion of the installation of eight Miller 27 in. by 41 in. TY Two-Color Letterpresses at Arrow Press, New York, N. Y., has been announced. This purchase, the largest single order for these presses ever booked by Miller Printing Machinery Co., will be installed in the flatbed letterpress division of this firm.



Edwards Brothers Opens Plant—Edwards Brothers, Inc., Ann Arbor, Mich. recently announced the opening of its new 38,000 sq. ft. printing plant. Plant is located on a 60 A. tract of land outside the city limits. The 60 yr. old book manufacturing firm also recently completed installation of a Miehle 49 Single Color Offset press, manufactured by Miehle Printing Press & Mfg. Co. Plans are to add another 49 Miehle press plus additional pressroom and bindery equipment. Pictured checking a press sheet from the new 49 Single Color are C. R. Huntworth, production manager of Edwards Brothers (right), and Harold Sheirk, Miehle Detroit manager.



Wagner Plant Doubles Production Facilities—*Foundations and steel erection have been completed for a modern plant building for the Wagner Litho Machinery Div., National-Standard Co., Jersey City, N. J., it was announced by C. F. Scheehle, jr., vice president. The Secaucus, N. J., building will be a single story, structural steel frame and concrete cinder block structure building with brick facing. It will have a 180 ft. front and a 240 ft. depth and will provide approx. 43,000 sq. ft. of manufacturing space, almost double the existing space in the Jersey City facility.*

Record Sales Week for Hoe — A recent record week totaling $6 million in new orders was announced by Joseph L. Auer, president of R. Hoe & Co., Inc. Some of Hoe's new press orders are from the Boston (Mass.) *Globe;* The Conde Nast Publications, Inc., publishers of *Vogue, House & Garden* and *Glamour;* Baltimore (Md.) *Sun;* Rock Island (Ill.) *Argus,* and the Dallas (Tex.) *News.* Shown here is the first of eight press units scheduled for shipment to the Dallas *News.* Checking the unit is Joseph L. Auer (right), president, and Arthur J. Durante (left), works manager of the firm. Auer is discussing application of preservative on ink drums with Peter R. Turnbull, traffic manager.

Western States Engravers Meet

The Western States Photoengravers conference, held June 15-17 at the Beverly Hilton Hotel, Los Angeles, was attended by over 200 persons. Conference membership consists of 80 photoengraving firms in California, Arizona, Colorado, Idaho, Oregon, Utah, Washington and Canada. Among those attending were R. C. Walker, National Photo Engravers Assoc. president; Frank Schrieber, national secretary; and Duff Murnick, past national president.

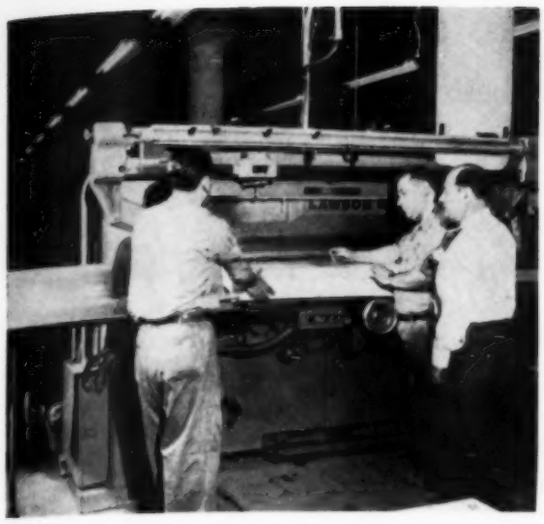
The program included discussions of such problems as billing, estimating, public relations, letterpress advertising, r.o.p. color, one-bite powderless etching, new letterpress rotary printing, ethics and other subjects.

Highlight of the convention was a demonstration of new photoengraving equipment shown by means of a closed circuit television broadcast from one of the large Los Angeles engraving plants. This broadcast showed many of the newest engraving processes and equipments in actual operation. Manufacturers had shipped the machinery in and had it installed. Commentary on the equipment accompanied the telecast and arrangements were made for two way communications so that questions could be asked and answered. Over 40 of the principal equipment manufacturers sent new equipment for this telecast.

Provisions were made for those viewing the telecast at the Beverly Hilton Hotel and a set of pamphlets bound into a single volume was specially prepared and presented to each member viewing the telecast.

The 1957 officers elected at the conference were President Bill Shaw, Tacoma Engraving Co.,

Western States Photoengravers Officials —From left to right, these men are: Ralph Shepherd, immediate past president; Howard Carroll, vice president and George Schaefer, jr., president.



First New York Installation — A Lawson 55-T-77 Cutter, incorporating a 77 in. back table to facilitate the cutting of sheets up to 77 in. in length, has recently been installed in Practical Bookbinding Co.'s plant in Long Island City, N. Y. The cutter is equipped with the Lawson Series V-65 Electronic Spacer and Air Cushion Device. In the illustration, William Ginsberg (right), secretary and general manager of the Company, is shown discussing a cutting job with D. J. Scarpone, plant foreman, and L. Rizzuti, operator (left).

Tacoma, Wash.; First Vice President Howard Carroll, Carroll Photo Engraving Service, San Diego, Calif.; Second Vice President Harry Hahn, Graphic Arts Engraving Co., San Francisco, Calif.; Third Vice President Jim Goerz, Acme Engraving Co., Los Angeles, Calif.; Secretary-Treasurer Earl Kennedy, Printing Plates Co., Oakland, Calif.; Directors Howard Bailey, Bee Engraving, Sacramento, Calif.; and Ron Jackson, Cleland-Kent Western Ltd., Vancouver, B. C.

The 1957 conference was voted to go to Seattle, Wash.; the 1958 conference to San Diego; and the 1959 conference to San Francisco.

Paper Demand is Ahead Of Production Capacity

Consumption of paper in the U.S. has risen from about 10½ million T.—180 lbs. per capita—in 1925, to a current 34½ million T.—418 lb. per capita. But even though the paper industry has increased its production by 20 million T. in the same period it has been unable to keep up with demand.

Author of these statements is James T. Kelly, western manager, Hamilton Paper Co., speaking recently at the membership dinner meeting of Printing Industries Assoc., Inc., Los Angeles.

Newsprint is the only section of the paper industry which has not expanded tremendously, said Kelly.

"The peak of newsprint production was in 1926 and then declined gradually till 1946 when it was less than half of the peak of '26. Since 1946 it has grown till today it is almost up to the peak of 1926," Kelly stated.

Reason for such vastly increased consumption, according to Kelly, is the inescapable fact that paper has replaced other basic materials, but nothing has replaced paper. Also the vast increase in direct mail (60% in six years) and the increase in publications account for some of the increased consumption.

Pointing to efforts of the industry to meet this pressing need, Kelly said most major paper mills have turned to a seven-day, twenty-four hour per day schedule. Millions of dollars are being spent on new equipment and facilities.

"In 1955 new machines accounted for 16,000 T. of new capacity and in 1956, it is planned, that capacity will be increased 108,000 T. through new machinery.

"It is not the easiest thing in the world to install a new paper machine. It takes from 18 to 24 months time and approx. $5 to $6 million to accomplish this."

Gravure Research Projects

Acquisition of a laboratory devoted to research aimed at improving the rotogravure process was approved at the annual membership meeting of Gravure Research, Inc. The research organization, whose membership includes gravure printers and suppliers of ink, press equipment and other supplies used in the gravure process, met in Chicago's Drake Hotel on June 5 to elect officers for the next year, and to approve the 1956 research program proposed by Research Director Harvey George.

The 1956 program, to be conducted at the organization's research laboratory located at 282 Seventh Ave., New York, N. Y., includes investigation of two specific gravure problems:

(1.) A research project to develop a method of accurate measurement of web tension. The project includes studies of drying temperatures, cylinder diameters, rubber impression rollers, and other factors influencing web tension.

(2.) A program of study and evaluation of current methods of color separation and tone and color correction, including electronic color correction. Improved procedures and information will then be recommended to member personnel.

Officers of Gravure Research, Inc. elected at the meeting were: J. B. Fisher, president; Harry Molitor, first vice-president; Carl Motash, second vice-president; and M. V. Waters, secretary-treasurer. Elected to the board of directors were M. Farrell, J. Briggs, O. Smiel, R. Hazard, C. Edson and T. J. Stultz. A. J. Powers was elected associate member of the board of directors.

Examiner Changes Face

The Los Angeles *Examiner*, a newspaper in the Hearst chain, has changed to an 8½ pt. body type and an all Bodoni head dress, both in Linotype cuttings. The body type is Mergenthaler Linotype's Ionic series with certain key letters redesigned. The type is 8½ pt. cast on a 9 pt. slug. The redesign was said to require five months work on the part of *Examiner* editors, Hearst officials, and Linotype representatives.

I. S. Berlin Orders Miehle—Along with its recent announcement of a $1 million expansion program for 1956, I. S. Berlin Press, Chicago, purchased a fourth Miehle 76 Four Color Offset press. This press makes a total of 16 Miehle offsets used by this firm. Pictured at the signing of the contract for the 76 Four Color are (left to right) Carlton Mellick, vice president of sales, Miehle; I. S. Berlin, founder and president of the firm, and W. J. McWilliams, Miehle Chicago manager. Inset photo shows the entrance to the plant.

Equipment Sales and Installations

Reports

Goss Installations

Growth of the Palo Alto (Calif.) *Times* has resulted in the purchase of three new units of Goss Headliner press by that daily. Publisher Harry L. Millet announced that the new press will have a General Electric Co. electronic drive and will be equipped with one color cylinder, double delivery folders and three sets of angle bars. The press is being installed now. The Goss Headliner units are being erected in the present pressroom, in which space had been provided for this type of expansion when the building was planned. The pit for the new units is constructed so that a fourth unit can be added when needed, without any additional construction work. In addition to the press units, the *Times* management is installing a Goss Plate Perfector and other new semi-cylindrical stereotype equipment, for which space also was provided in the construction of the building. Executives of the *Times* include George F. Morell, president; Dallas E. Wood, vice president; and E. R. Lovett, secretary-treasurer. Eugene C. Bishop is general manager. Key mechanical personnel include William P. Carlile, shop superintendent; M. E. Hill, stereotype foreman; and Carl Miller, pressroom foreman.

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Lawson Installations

Recent installations of Lawson Cutters and Bindery Equipment were announced by the E. P. Lawson Co. They are as follows:

Lawson 55 in. Series V-65 Hydraulic Clamp Electronic Spacer Cutter: Shaw & Slavsky, Inc., Detroit, Mich.; Shelby Crafteo Corp., Chicago; Union Bag & Paper Corp., Hudson Falls, N.Y.; Kurtz Brothers, Clearfield, Pa.

Lawson 52 in. Series V-65 Hydraulic Clamp Electronic Spacer Cutter: Rauch & Stoeckl Printing Co., Buffalo, N.Y.; Springfield Tablet Mfg. Co., Springfield, Mo.; Brownville Paper Co., Inc., Brownville, N.Y.

Lawson 46 in. Series V-65 Hydraulic Clamp Electronic Spacer Cutter: Reliable Press, New York, N.Y.; B. L. Makepeace Inc., Boston.

Lawson 39 in. Automatic Clamp Cutter: Acme Mail Advertising Co., Omaha, Neb.; Colorado Rulers & Binders, Denver, Colo.; Delmar Printing Corp., New York, N.Y.; Middlesex Label Co., Inc., Ashland, Mass.; Printing Industry Corp. of America, Chicago.

Lawson Series B 3-Knife Rapid Trimmer: Johnson Printing Co., Eau Claire, Wis.; Mendle Printing Co., St. Louis, Mo.; National Publishing Co., Washington, D.C.; Rand McNally & Co., Hammond, Ind.; Superior Bindery, Inc., St. Louis, Mo.

Lawson Model S Multiple Head Drill: G. J. Aigner Co., Chicago; Clinton Paper Co., Inc., Lock Haven, Pa.; Lind Brothers, New York, N.Y.

Other installations of Lawson Cutters and Bindery Equipment were recently announced by the E. P. Lawson Co. as follows: Lawson 55-T-77 Cutters at Western Lithograph Co., Wichita, Kan., and Ozalid, New York, N. Y.; Lawson 52 in. Series V-65 Hydraulic Cushioned Clamp Electronic Spacer Cutter at Seiple Lithograph Co., Canton, O., and New Utrecht Press, Inc., Brooklyn, N. Y.; Lawson 39 in. Heavy Duty Automatic Clamp Cutter at Craftsman Press, Inc., Washington, D. C. and Remark Bindery, Inc., New York, N. Y.; Lawson Series B 3-knife Rapid Trimmer at Callaghan & Co., Mundelein, Ill.; The Steck Co., Austin, Tex.; U. S. Government Printing Office, Washington D. C.; Waldemar Press Inc., Indianapolis, Ind., and Wisconsin Cuneo Press, Inc., Milwaukee, Wis.; Lawson Model S Multiple Head Drill at Craftsman Press, Inc., Washington, D. C.

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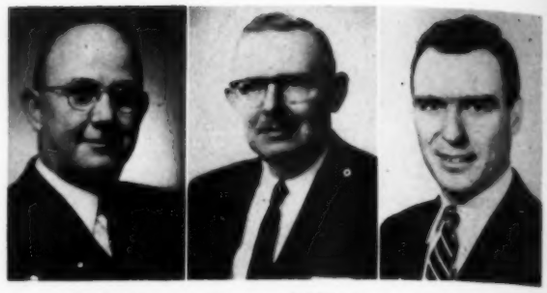
Gavrin Installs

Gavrin Press, business forms manufacturer, recently added two dual purpose carbon processing presses of its own make to its plant equipment. One press has been installed at Gavrin's branch plant in Denison, Tex., while the other is in operation at the main plant in New Rochelle, N. Y. These presses can be used for applying spot carbon directly to the back of forms parts or to Kraft tissue coming between parts. In addition, they can be made to process carbon (*i.e.*, prepare for interleaving machinery) in much the same manner as conventional, high speed carbon presses. Together with other newly adopted carbon handling devices, it is expected the presses will enable the company to meet the increasing demand for one-time Snap-Easy and Tab-Easy Forms.

Intertype Names Three—Raymond B. Daigle, manager of Intertype Corporation's New England Branch Office in Boston, Mass., since 1928, was appointed eastern district sales manager of the Corporation, as announced by Alden T. Mann, jr., executive vice president. Daigle's office will be in the Intertype head office in Brooklyn, N. Y. Daigle succeeds Thomas A. MacElwee, who joined Intertype in 1920. Daigle is a member of the Boston Club of Printing House Craftsmen, Salesmen's Guild, and the Society of Printers in New England. Harold B. Atterbury, sales representative of Intertype in New Jersey for over two years, succeeds Daigle as manager of Intertype's New England Branch Office in Boston. Atterbury has served as printer on several newspapers and has taught Graphic Arts classes in several Eastern schools, including Carnegie Institute of Technology, where he was assistant professor of printing management for several years. Atterbury has been succeeded as sales representative in New Jersey by Vincent J. Murtha, a graduate of Rochester Institute of Technology and a former operator on Long Island and upstate New York newspapers.



DAIGLE ATTERBURY MURTHA

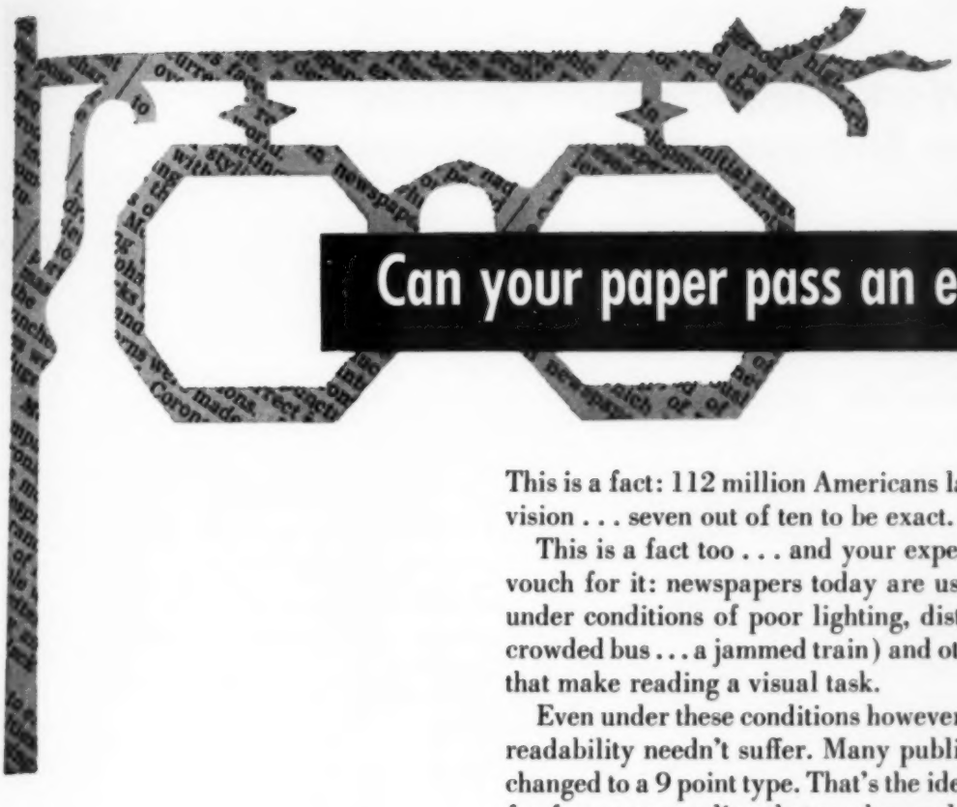
"I'm j-j-j-jogging my memory! I f-f-forgot where I put my -l-l-lunch!"

Synergism Tells Story

Synergism, according to Webster is, ". . . a joint effort that produces a greater effect that the sum of the same efforts taken independently." Synergism is the key word in the Graphic Arts Assoc. of Illinois membership campaign aimed at enlisting as members all eligible Illinois firms in the Graphic Arts industries.

Promotion for the campaign consisted of a 24 page booklet called *What the Hell is Synergism?*, which was sent to every printer, publisher, and printing industry supplier in the State of Illinois. Trying to promote every member to enlist a member, a special issue of the association's membership journal, *Galley Proof*, was also sent out, which pointed out that every member benefits more from his membership in a larger group.

Personal follow-up is planned by members of the membership committee and the GAAI staff and officers. All of Illinois has been divided into districts, and the follow-up campaign planned for local area saturation. To further stimulate interest in GAAI, a series of technical and business seminars are being organized for presentation in Chicago and various downstate communities. All printers and Graphic Arts firms in any area will be invited to attend these seminars, to hear discussions led by industry leaders.



Can your paper pass an eye test?

This is a fact: 112 million Americans lack perfect vision . . . seven out of ten to be exact.

This is a fact too . . . and your experience will vouch for it: newspapers today are usually read under conditions of poor lighting, distraction (a crowded bus . . . a jammed train) and other factors that make reading a visual task.

Even under these conditions however, a paper's readability needn't suffer. Many publishers have changed to a 9 point type. That's the ideal solution for fast, easy reading that readers welcome.

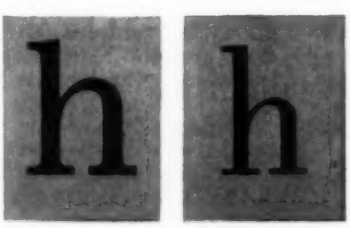
If you've considered a change, here's a suggestion: look over the new Corona cuttings.

Corona saves newsprint, too!

Although Corona looks as big as faces a full point larger, it has the alphabet length of smaller faces. Therefore, it enables you to get more words into a column inch and save on newsprint, while still maintaining highest possible readability.

If you want to use narrower columns, you can trim column measures and still obtain good legibility with Corona. Your best choice for readability and *newsprint economy* in 8- or 7½-point is

corona



Compare the Corona "h" and the Bodoni Book "h" (both greatly enlarged) and you can see why Corona is so perfectly suited for newspaper use. To achieve even color on newsprint, thin lines are thickened and thick lines thinned. Corona has also been designed to achieve maximum sharpness of image under conditions of mat shrinkage.

For readability and newsprint economy, get Corona!

Mergenthaler Linotype Company, 29 Ryerson Street, Brooklyn 5, N. Y.

Set in 12 pt. Bodoni Book, 9 pt. Corona and members of the Spartan family

• LINOTYPE •

Agencies: Atlanta, Boston, Chicago, Cleveland, Dallas, Los Angeles, New York, San Francisco. In Canada: Canadian Linotype, Limited, Toronto, Ontario

LEADERSHIP THROUGH RESEARCH

Two Work Simplification Devices For Engraver and Phototypesetter

Here are two rather important work simplification ideas for the photoengraver and the phototypesetter. Howard Carroll, Carroll Photo Engraving Service, San Diego, Calif., has installed two temperature controlled developer tanks above the temperature controlled sink in the dark room.

Carroll relates that the usual custom among photoengravers is

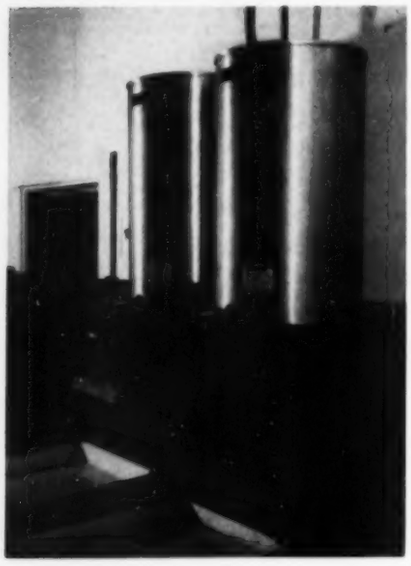


Fig. 1.

to place developer tanks some place in the plant. Whenever fresh developer is needed, it is brought to the sink developing trays in a container. It is then necessary to wait until the fresh developer becomes adjusted to the proper working temperature.

Other benefits accruing from the tank idea shown in the accompanying illustration (Fig. 1) are (1) Large tanks allow purchasing of developer at a lower price; (2) Less time is required to mix the developer because it doesn't have to be prepared as frequently as in smaller tanks; (3) Due to handling ease, the photographer does not hesitate to discard spent developer, thereby adding quality to his work; (4) Developer is easily accessible since the photographer merely turns on the two valves to replenish the tray with the new developer of the proper temperature (this can be done by pouring proper quantities of A and B developer into a glass graduate); (5) Should the end of the day approach or a short shift is being worked, just enough developer can be put in the tray to care for immedate work (this conserves developer consumption).

Shown in the illustration are two 25 gal. capacity Leedal stainless steel tanks (usually available from the supplier of photoengraving equipment). A valve is mounted at the bottom of each tank; there is a floating cover which rides the surface of the developer.

The tanks at Carroll Photo Engraving Service were mounted on a shelf above the trays in the temperature controlled sink. Hot water has been piped to the tanks to facilitate filling them. An Eastman electric mixer has also been mounted at the top for use in either tank. The pumping unit is located in the bottom part of the sink cabinet. A copper tube was run from the sink refrigerating unit up the wall back of the tanks and down into each tank, terminating at the bottom in a coil shaped much after the fashion of the heating elements in an electric kitchen range.

Carroll explained that two controls are available: (1) Each time the refrigerating unit is started by the automatic control in the sink, it also cools the developer in the storage tanks above, and (2) The refrigerating unit may be turned on manually at any time such as immediately after filling the tanks with new developer when the water is hot.

Carroll explained that one thing should be understood. There are many procedures which prove to be successful in moderately temperatured San Diego, he said, "which would not be worth a darn some place else. We do not find it necessary to raise the temperature of our solutions. It just doesn't get that cold at any time of the year in San Diego. Our problem is strictly one of lowering the solution temperature a few degrees when necessary. If we had a heating problem as well as a cooling problem, this arrangement might not be feasible," he concluded.

Fotosetter Tank Idea

In some instanees, operators in composing departments or typographic composition plants, utilizing Fotosetter type composition do not turn out highest quality reproduction work simply because of prolonged use of spent developer. In several instances, it has been reported that darkroom operators continue using developer even after its known effective properties have been exhausted, perhaps to the extent that it "looks like coffee." This may be a transitory condition in the trade because while experienced photographers and photoengravers realize the importance of discarding spent developer, the mechanically minded printer doesn't always realize the necessity for changing developer after its known efficiency has been depleted.

Anyhow, a method which simplifies changing developers for phototypesetting work is used in the plant of Jaggers - Chiles - Stovall, Dallas, Tex.

The same principle for making it easy to supply fresh developer is used as in the Carroll Photo Engraving developer tank story above.

Mounted above the temperature controlled sink in the J-C-S Fotosetter department darkroom are

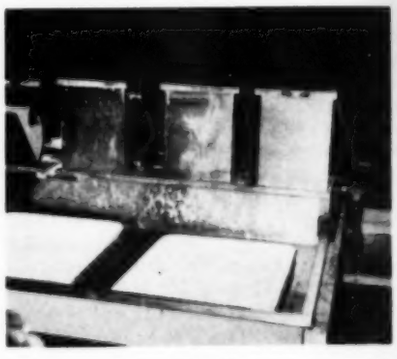
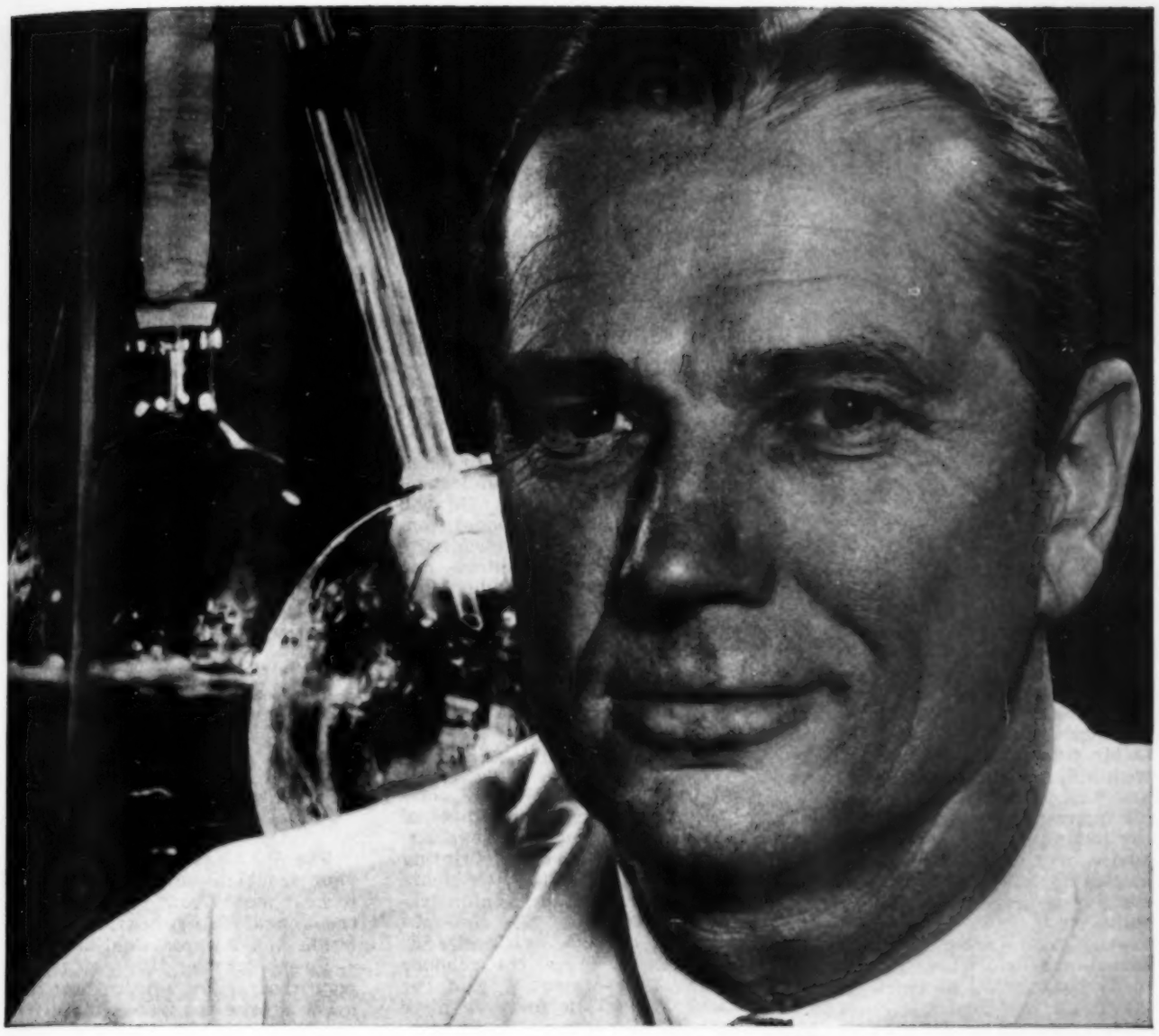


Fig. 2.

three 5 gal. tanks (Fig. 2). One of these contains the developer fluid, one the short-stop fluid, and the third contains the hypo solution.

Attached to the lower outside part of each tank there is a small hose. The hose extends slightly above the top edge of the tank and is held in place by a spring clip. It is a simple matter to release the hose from the clip and point it downward into the tray. The fluid flows by gravity into the tray. This simple arrangement for putting fresh solution in the proper tray provides a means for eliminating resistance to what might be considered a "bothersome operation." As in the case of the Carroll developer tanks, quality of phototypesetting work is much improved.



The Man from Morrill

knows how to solve your ink problems

The Man from Morrill has been solving difficult ink problems for 116 years. That's why he's equipped to analyze your pressroom operation and provide you with *exactly* the ink you need.

Out of this collective laboratory and pressroom experience have come the many ink formulations of the high quality and uniformity that have made Morrill the standard of the newspaper industry.

Why not invite the Man from Morrill to solve your ink problems? He will recommend the right ink for your pressroom operation. And it will be delivered in drums or by tank truck—metered to make certain you receive every pound you pay for.

Everyone who buys newspaper ink has a definite reason for having a talk with the Man from Morrill.

A Division of Sun *Chemical Corporation*

Geo. H. Morrill Company

10th Street & 44th Avenue, Long Island City 1, N. Y.

DIVISIONS OF SUN CHEMICAL CORPORATION

HORN (paints, maintenance and construction materials, industrial coatings) • **WARWICK** (textile and industrial chemicals) • **WARWICK WAX** (refiners of specialty waxes) • **RUTHERFORD** (lithographic equipment) • **SUN SUPPLY** (lithographic supplies) • **GENERAL PRINTING INK** (Sigmund Ullman • Fuchs & Lang • Eagle • American • Kelly • Chemical Color & Supply Inks) • **MORRILL** (news inks) • **ELECTRO-TECHNICAL PRODUCTS** (coatings and plastics) • **PIGMENTS DIVISION** (pigments for paints, plastics, printing inks of all kinds) • **OVERSEAS DIVISION** (export) • **A. C. HORN COMPANY, LIMITED** (Canada) • **GENERAL PRINTING INK CORPORATION OF CANADA, LIMITED** • **FUCHS & LANG de MEXICO, S. A. de C. V.**

HARRY PORTER

Mr. Offset Retires As Vice President

Harry A. Porter, with over 50 years of outstanding service to the Graphic Arts industry, has retired as senior vice president of Harris-Seybold Company to take a less strenuous role as consultant. Harry, whose friends in the industry are legion, is logically referred to as Mr. Offset, and while his friends wish him a well deserved rest they are happy that he will continue his interests and associations with the industry. Henceforth, he will advise on Harris-Seybold's overall marketing and product development programs and will maintain active contacts with printing trade associations, particularly in the educational field where he has already contributed so much to the industry's welfare.

Harry served as vice president in charge of sales for Harris-Seybold from 1928 to 1952 at which time he became senior vice president. During those years he traveled hundreds of thousands of miles to attend meetings and conventions and discuss the problems of individual plant executives. Not only has he been a champion of lithography but a great friend and inspiration to the entire Graphic Arts field, and his leadership in education is deeply appreciated.

Harry Porter was 19 years of age when he joined the Harris Automatic Press Company of Niles, O., later to become Harris-Seybold. On April 13, 1956 he celebrated his golden anniversary with the organization. It was only a few months after he joined the firm that Harris shipped the first commercially practical offset press, and in the years that followed Porter became a champion of offset-lithography, or Mr. Offset as he is often called. He became sales manager of the firm in 1916, and vice president in charge of sales in 1928.

A recipient of many honors during his career to date, he was named Graphic Arts Man of the Year in 1955. Last fall the annual convention of the National Association of Photo-Lithographers presented him with a certificate of appreciation and gratitude. This year the 20th Anniversary Edition of the Graphic Arts Education Association Yearbook was dedicated to him. Recently he was elected the fourth Life Member of the Direct Mail Advertising Association, in recognition of an outstanding presidency of that national group in 1949-50.

Harry has been highly active on behalf of the Education Council of the Graphic Arts Industry, Inc., and only recently completed a 5000-mile tour of U.S. printing centers to build up interest and membership in the Council. He will continue to attend national conventions and keep in touch with printing executives, editors and other key people in the industry.

Printing Equipment Engineer salutes Harry A. Porter and his outstanding contributions to the printing industry.

Tech Printing Grads Nearly 100% Recruited

Approx. 95% of the 1956 class from the Carnegie Institute of Technology's College of Engineering and Science, School of Printing Management and the Graduate School of Industrial Administration have accepted jobs throughout the country, says Charles E. Wangeman, head of the school's Bureau of Placement. And the outlook for 1957 is for even more strenuous recruiting.

While placement approaches 100%, salaries are at an all-time peak and numerous fringe benefits are offered, industry still casts a discerning eye at the men they interview. In a recent report by the Detroit Employer Opinion Survey titled, *What Are Business and Industry Looking For in College Graduates*, results showed that qualifications sought included: (1) Competence and performance; (2) initiative and imagination; (3) promise of ability to get along with people generally and particularly with fellow employees and subordinates; (4) a good attitude toward one's job, the company and toward people generally; (5) ability to make decisions; (6) skill in leadership; (7) ability to communicate clearly and forcibly; (8) a broad educational background; (9) a well-developed and rich personality, and (10) a specialized training.

During the past school year approx. 700 companies contacted the Placement Bureau in search for graduates of Carnegie Tech's College of Engineering and Science, School of Printing Management, and Graduate School of Industrial Administration. Industry sent 544 recruiting representatives to Carnegie Tech who conducted 4536 interviews. At graduation 315 students of a possible 331 B.S. candidates were placed, while the remaining 16 deferred their decisions to a later date.

Perhaps flexibility best describes what industry is now looking for and what Carnegie Tech Printing Management graduates have to offer, says Wangeman. Yet it is this very flexibility which makes the graduate a much sought after person, that greatly contributes to the present shortage of engineers. One of the surprising results of a recent Carnegie Tech alumni survey was that of 18,705 alumni only 3573, or approx. 17%, have remained in engineering, science or related fields. More than 2000 alumni, or approx. 12%, have moved up into the management and administrative functions of industry.

Give All Details Try for Benny

The P.I.A. judges will listen to your troubles—in fact, they want to hear more about your entries in the annual Self-Advertising Exhibition and Awards Contest.

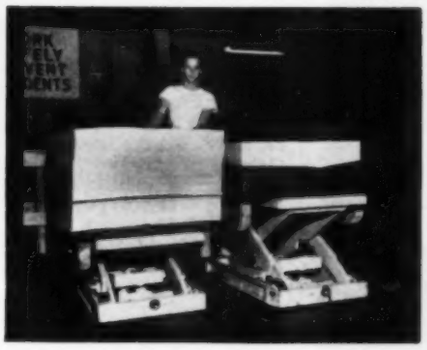
Jurors for the 1955 contest report that many printers received lower scores than they may have deserved simply because they didn't tell enough about the purpose, use and results of their efforts. A small and progressive Chicago shop, for instance, submitted a tremendously effective Printing Planner, but gave no information on who got it and how it was received.

Several firms, from Canada to the Mid-West, produced beautiful booklets, telling prospective customers all about their operation, but said nary a word about the number mailed or what impression they made.

So, when you try for a 1956 Benny (deadline for entries, Sept. 28), be sure to report all the factors involved in the production of your self-advertising. Space is provided on entry forms for such information. To obtain entry forms send to Miller Printing Machinery Co., 1117 Reedsdale St., Pittsburgh 33, Pa., or Printing Industry of America, Inc., 5728 Connecticut Avenue, N.W., Washington 15, D.C.

How A Paper Mill Can Cut Its Handling Costs

Placing Southworth Lift Table Under Load

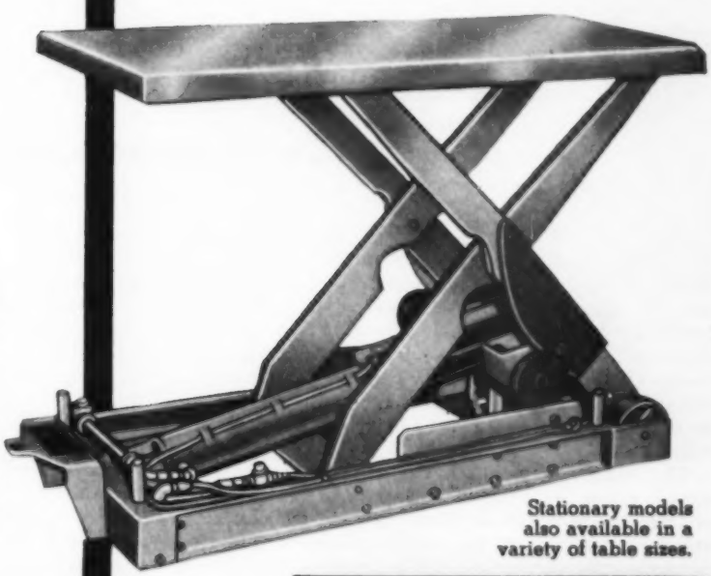


Adjustable Heights for Sorting or Piling

Typical Mill Trimming Installation

THE NEW PORTABLE SOUTHWORTH LIFT TABLE

Capacity	4000 lbs.
Platform Dimensions	24" x 52"
Collapsed Height	7¼"
Extended Height	37¼"
Controls	Foot or hand switches
Motor	½ h.p. single phase, 115 volt AC 60 cycle, 1725 rpm.
Hydraulics	Pump actuated ram with built-in relief and solenoid valves



Stationary models also available in a variety of table sizes.

Elevating Stock to Facilitate Cutting

As it has in paper mills, the Southworth Lift Table is eliminating the fatigue factor, reducing handling time and increasing production in printing plants, lithographers and binderies. Users are quick to see the four-way advantages of this versatile Lift Table. Not only may it be easily relocated for various tasks, but when placed under a skid or palletized load, it then elevates the stock to the correct feeding or working height for the machine or operation involved. In tandem, the Southworth Lift Table is the ideal positioner for such handwork as sorting or re-piling . . . with free access to work from all four sides as there is *no* superstructure to hamper the operator.

Keeping Stock at the Proper Working Height Saves Time, Saves Money

*Photos Courtesy of Tileston & Hollingsworth

For Further Information Write

SOUTHWORTH MACHINE CO.

298 WARREN AVENUE PORTLAND, MAINE

This little illustration doesn't commence to do justice to the fine appearance of a page black and two color ad appearing recently in the Holyoke (Mass.) *Transcript Telegram*. In addition to black ink and white paper, two other colors were obtained. Ad printed direct from magnesium plates.

Excellent R.o.p. Color Printed By Massachusetts Newspaper

The use of r.o.p. color is increasing rapidly in the daily newspaper field. A considerable number of smaller and medium size newspapers have been devoting much energy to fast execution of color. In some of the smaller plants considerable ingenuity is exercised in producing acceptable color work appearance.

The major item with respect to r.o.p. color in daily newspapers is that there must be close cooperation among all of the mechanical departments concerned with reproduction. This is stressed by Superintendent Frank Downey of the Holyoke (Mass.) *Transcript-Telegram*. The *T.-T.* has been doing black and one color work for some time. Recently, it was decided that that paper's executives should venture a step further and attempt black with two additional colors.

In the accompanying illustration is shown miniature reproduction of a black and two color advertisement which appeared in the *Transcript-Telegram* for Wednesday, June 13. In addition to the black, white space, and two colors, two additional color effects were secured by using 30% and 70% screens in certain sections of the advertisement. Colors used were yellow and deep reddish brown. Illustrations of figures were in black with three figures given highlight halftone treatment. It is doubtful if anyone could have obtained a more pleasing effect with the materials at hand.

The advertisement was printed direct from 16 ga. magnesium engravings, curved and fastened with adhesive to stereotype plate saddles.

Downey explained that the copy and layout of colors were furnished by a Holyoke advertising agency. In the *T.-T.* plant, one negative was made from a paste-up. From this negative the three plates were made. The line plates were deep-etched 0.040 in. to avoid routing. Screens were double printed into position as indicated. From the one negative color separating was done to obtain each complete color and eliminate the others.

"Register marks," said Downey, "are placed on each plate to simplify registering the original engravings with the black stereotype plates in the pressroom. In the case of the Steiger's advertisement, it took the pressmen less than 1 hr. to register the plates on the press. The stereotypes for mounting the engravings which have to be accurate, are the work of the stereotype department."

Downey's discussion about expanding the color printing capacity of the *Transcript-Telegram's* press equipment is very interesting. He said: "We operate a four-unit press with double folder. The folder is positioned centrally of the units. Recently, we had a reversing gear installed on one printing couple on the second unit behind the folder."

How the web was printed on both sides with black and two additional colors on one side using portable ink fountains was explained as follows by Downey:

"On the unit behind the folder we came up from the reels through the first printing couple to print black on one side of the web. From there we went over through the printing couple on the same unit to print yellow. After the web leaves this first unit it travels up and over a pipe roller and a compensator roller. Then it travels down into the first printing couple of the second unit behind the folder. (This is the couple equipped with the reversing gear.) Thus, this couple is runnnig in reverse motion, that is, in counter-clockwise direction rather than the clockwise direction in which the other units are running.

"Here we are able to print on the same side of the web upon which we have already printed the yellow ink. Now we go across to the second printing couple of this same unit and print the black on this side of the web to give the third and final color.

"With this reversal of one printing couple we can print 48 pages with spot color on certain pages. On 44 pages we can print spot color on any page, and for black and two colors we can print on any certain 8 pages."

Graphite Container

A graphite container and gun that dispenses graphite with a squeeze of the fingers, has been placed on the market by Servwell Products Co. The Blaco Graphite Gun is held in the hand while spraying dry lubricant at its target. It is claimed that enough lubricant is contained in the unit to permit several thousand shots. A rubber squeeze type bulb is attached to the container. For further details, please mention PEE No. 179 in your request.

$$S(f;x,y) \equiv \overline{\lim_{r=0}} \frac{m(f;x,y;r) - M(f;x,y;r)}{\frac{1}{2}r^2}.$$

$$A = \exp\left[\frac{1 \pm (1-b^2)^{\frac{1}{2}}}{b}\theta\right], \qquad B = \exp\frac{\frac{33}{33}-1 \pm (1-b^2)^{\frac{1}{2}}}{b}\theta^{\frac{44}{44}}_{44}.$$

$$\int_{-\infty}^{-0} |f(t)|^p\,dt \leqslant b\sum_{1}^{\infty} |a_n|^p.$$

$$\int_0^\infty |f(t)|^p\,dt \leqslant b\sum_1^\infty |a_n|^p.$$

INVOLVED FORMULA OR CONSUMER FOLDER

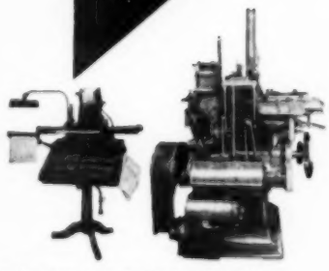
IT'S ALL ONE TO....

MONO type

MONOTYPE® is the only system of machine typesetting that casts one character at a time. It is this basic difference that permits Monotype to produce ... with beauty, economy and speed ... the composition for any kind of job the printer may encounter.

A typographic genius might, with great care and waste of costly time, knock out a quality job with any system. But an average, every-day operator can, with his Monotype, turn out fine typography, economically, day after day.

Yes, Mr. Printer, it's a fact; with our Monotype keyboard and composition caster you're ready, typographically, for any job in sight. Only the printer with a Monotype can make that claim. "Composing Roomatism" can be cured; for convincing proof, call or write your nearest Monotype office today.



KEYBOARD AND COMPOSITION CASTER

This advertisement is set in Monotype 20th Century Series

MONO type

LANSTON MONOTYPE MACHINE COMPANY

24th & Locust Street, Philadelphia 3, Pa.

BRANCH OFFICES
ATLANTA—57 Forsythe Street
BOSTON—80 Federal Street
CHICAGO—216 West Jackson Boulevard
DENVER—A. E. Heinsohn Printing Machinery & Supplies
NEW YORK—441 Lexington Avenue
SAN FRANCISCO—115 New Montgomery Street
CANADA—Monotype Company of Canada, Ltd., 77 York Street, Toronto 1, Ontario
BRAZIL—Companhia Lanston Do Brazil, S.A. Rio de Janeiro

LANSTON MONOTYPE MACHINE COMPANY
24th & LOCUST STS.
PHILA. 3, PA.

PEB

Send for Our 1956 Printer's Calendar—a real collector's item, issued to commemorate the 250th Anniversary of Benjamin Franklin's birth.

NAME.....

COMPANY.....

ADDRESS.....

CITY..... ZONE..... STATE.....

PATENTS

For The GRAPHIC ARTS

Covering patents issued May 1, 8, 15, 22 and 29.

All new patents for the Graphic Arts are reported exclusively for *Printing Equipment Engineer* by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. *Printing Equipment Engineer* is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

PHOTOGRAPHIC COMPOSING APPARATUS

The machine is of the type using a continuously rotating mechanism for moving characters successively through a projection position. The selector mechanism for causing photography of selected characters is disposed upon a support in a circular arrangement. Patent 2,744,457 by Rene A. Higonnet and Louis M. Moyroud, assigned to Graphic Arts Research Foundation, Inc.

CONTROL UNIT FOR TYPESETTING MACHINE

For use on typesetting machines of the type in which each line of type is justified as set, this unit controls a perforated tape so as to stop the rotation of type support rings in preselected positions and to control all operations of the machine automatically. Patent 2,744,973 by Blackwell K. Murchison.

PUNCH AND DIE MACHINE FOR PERFORMING BOTH BLANKING AND TRIMMING OPERATIONS

The manufacture of matrices for Linotype machines has been simplified by combining the blanking and trimming operations. A two-part die is used, the blank being initially produced in the die by passing a power driven reciprocating punch through a strip of material, the return or completion stroke serving to trim the blank. Patent 2,746,542 by George Biegert, assigned to Mergenthaler Linotype Co.

CASTING MACHINES TYPOGRAPHICAL

The improvements of this patent are directed to casting machines of the type of the original Mergenthaler patent 436,532. One feature is an electrical attachment to prevent the casting operation unless the spacebands contained in the line are capable of fully expanding the line between the jaws and sufficient pressure is brought against the vise jaws and unless the mold and melting pot are fully advanced. Patent 2,746,600 by Louis Rossetto, assigned to Mergenthaler Linotype Co.

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Platemaking:

PHOTOGRAPHIC COPYING DEVICE

The device is useful for producing a photographic film or plate having composed thereon in proper alignment an entire image of the printed page for use in photographic engraving. A plurality of positions from which one or more component parts of a page may be projected is provided. Patent 2,744,443 by Rene A. Higonnet and Louis M. Moyroud, assigned to Graphic Arts Research Foundation, Inc.

METHOD FOR PRODUCING FLAT PRINTING PLATES

Flat printing plates of the electroplate type may be made without the placement of the shell in a holding pan prior to the pouring of a molten metal backing. The device presses the molten backing material onto a plate shell to not only fill out the shell but to eliminate air bubbles and produce a pressure cast plate. Patent 2,746,106 by Robert R. Myers, Jr.

ETCHING

In etching copper for making a photoengraving plate, such plate having part of its surface masked with an etch resistant coating, an aqueous ferric chloride etching solution containing thiourea is impinged on both the masked and unmasked surfaces. The thiourea increases the etch factor, e.g., the ratio of the depth to side etch. Patent 2,746,848 by Rexford W. Jones, assigned to Photo-Engravers Research, Inc.

PHOTOGRAPHIC APPARATUS

Plano relief surfaces of letterpress printing forms are illuminated and photographed so as to create a shadow area which outlines and sharply defines such surfaces from their backgrounds. A photoengraver's camera with specially designed light sources is used. Patent 2,747,459 by George L. Morrison.

MACHINE TO ABRADE STEREOTYPING PACKLESS MATRICES

The machine is adapted to receive a matrix, after molding and scorching and while still hot, and to reduce the rear face of the matrix to a uniform thickness over its entire area relative to the printing surface. The machine includes a heated storage cabinet so that matrices can be stored in heated condition until used. Patent 2,746,211 by Edgar A. Mills.

UNIVERSAL PRINTING PLATE REGISTERING AND PUNCHING MACHINE

The machine accommodates printing plates of various sizes and thicknesses. The plate support is a turn-table having manually actuated clamps for engaging the edges of the printing plate. Patent 2,745,186 by Harry W. Faeber, assigned to Time, Inc.

ANNOUNCING

CRAFTSMAN

Hand Clamp
HYDRAULIC
Power
Paper Cutters

26½" and 30½"

These Craftsman Power Cutters with hydraulic cutting operation are designed to provide the smaller plant with power cutting at a minimum investment.

Built to all Chandler & Price standards of high quality and dependable service, the many features incorporated in these cutters not only assure dependably accurate cutting, but also easier, faster operation and bigger production with less effort for the operator.

Standard equipment includes two knives; four cutting sticks; table light and tape magnifier; steel tape; two handed, safety operating mechanism; hydraulic power unit; and motor. For complete details write for specification sheet.

THE CHANDLER AND PRICE COMPANY
6000 Carnegie Avenue • Cleveland 3, Ohio

Printing Presses:

ROTARY PRINTING DRUM FOR DUPLICATING MACHINES

The drum is of the type covered by patent 2,697,397. By facilitating the transfer of ink between the opposite ends of the perforated shell on which stencil is wrapped, an accumulation or logging of ink is prevented. Patent 2,743,670 by Richard W. Bailey, assigned to Milo Harding Co.

IMPRESSION ADJUSTING MECHANISM FOR PRINTING PRESSES

This mechanism indicates accurately the position to which one of a pair of cooperating printing cylinders, used particularly in newspaper work, has been adjusted. Such adjustment is effected by turning eccentric sleeves or bushings in which the cylinder bearings are carried. Patent 2,743,672 by Charles A. Harless and Emory W. Worthington, assigned to R. Hoe & Co., Inc.

TENSION CONTROL SYSTEM FOR PRINTING PRESS

A floating roller and tension belt controlled by a hydraulic fluid pressure regulation valve provides an extremely responsive and constant running web tension. This economically produced device is easily adaptable for use with existing web fed printing presses. Patent 2,743,880 by Henry L. McWhorter, assigned to The Goss Printing Press Co.

WEB TENSION CONTROL

The control is adapted to correct disturbances caused by out-or-round paper rolls, transient loss of tension during slow-down and momentary overrun of the roll when press controller is moved in the decrease speed direction. It also overcomes the problem of belt slap. Patent 2,743,881 by Henry L. McWhorter, assigned to The Goss Printing Press Co.

WEB TENSION CONTROL

This control provides an even more precise and sensitive controlling action than the web control of patent 2,743,881, the application for which is a division of that filed on the present patent. Patent 2,743,882 by Dennis H. Knowles, assigned to The Goss Printing Press Co.

BRAKE AND INDEXING MEANS FOR PRINTING MACHINES

In a direct mechanical negative printing machine having a bed that supports a photolithographic plate over which is traversed a carriage bearing equipment for making exposures of a negative at different parts of the plate surface, this brake and index provides for accurately and quickly setting the carriage at different parts. Patent 2,744,458 by Francis Frederick Cook and John Eric Spriggs, assigned to Pictorial Machinery Ltd.

PARTITIONED FOUNTAIN ROTARY INTAGLIO PRINTING MACHINES

The ink fountain structure of this printing cylinder arrangement supplies different inks to different lengthwise portions of the printing cylinder. The cylinder has a section of reduced diameter with two sealed partitions and two doctor blades. Patent 2,744,464 by Charles A. Harless, assigned to R. Hoe & Co., Inc.

AUTOMATIC VIBRATOR ROLL

For use on a printing press for inducing reciprocating movement of the roll, a two-way screw is fixed in the frame of the machine. The threads of the scraw constitute a driving dog, which dog has a crescent contour of such forms as to have maximum bearing on the screw threads at the instant of reversal. Patent 2,745,343 by Noel Davis, assigned to Harris-Seybold Co.

FLEXIBLE SHEET SECURING DEVICE FOR PRINTING ROLLERS

In rotary printing presses for multicolor work, a lock-up or clamp for holding plates of thin metal, plastic or fiber around the periphery of the plate cylinder is claimed. The lock-up clamp is of such form that no slot is required in printing plate and all of plate surface is available for use. Patent 2,745,344 by George Rogers Brodie, assigned to Fred'k. H. Levey Co., Inc.

NONUNIFORM SPEED DRIVE MECHANISM

The mechanism provides smooth acceleration and deceleration to driven elements, such as in rotation of a feed cylinder taking sheets at low speed and transferring them to an impression cylinder traveling at increased speed. Additional cams and rollers are provided for holding the accelerating and decelerating cams and rollers in engagement. Patent 2,746,312 by James R. Wood, assigned to Harris-Seybold Co.

PRINTING CYLINDER ELEVATING MEANS

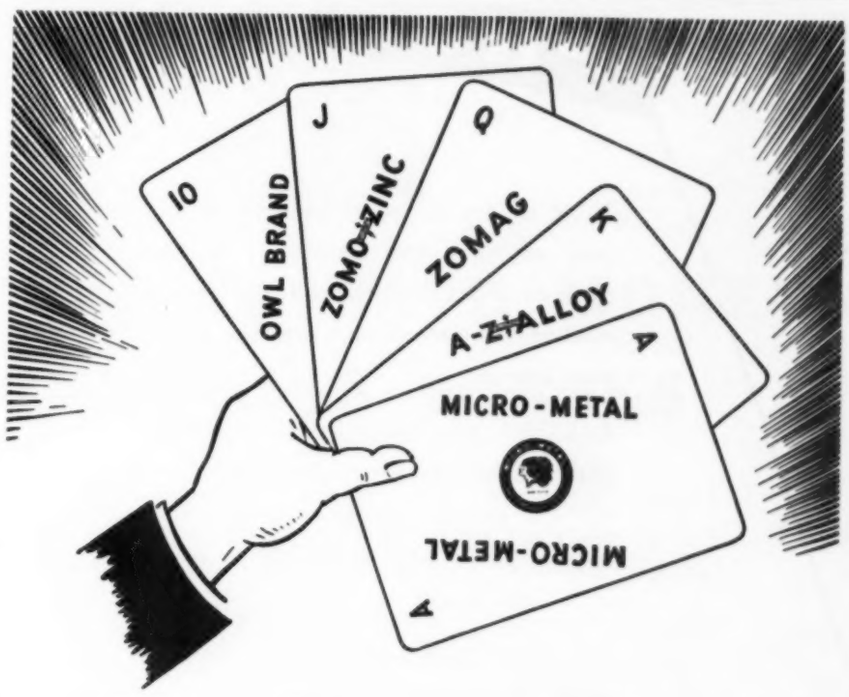
On an intaglio press in which the web to be printed is held against the printing cylinder by a pressure roll, the roll may be advanced or retracted from printing position while maintaining a constant web tension. In a multi-unit press, each unit may be controlled independently without altering web feed of other units. Patent 2,746,386 by Arthur P. Bamford, assigned to E. G. Staude Mfg. Co., Inc.

ROTARY INTAGLIO PRINTING AND EMBOSSING PRESS

This roller and die arrangement produces fine quality engraved reproductions of any size at a high speed, by simultaneously printing and embossing. An improved inking mechanism and a roller for wiping ink from the unengraved surface portions of the die are also featured. Patent 2,746,387 by John W. Neumann, assigned to Rotographic, Inc.

MOVABLE NIPPING ROLLER DELIVERY FOR A PRINTING MACHINE

The mechanism is of the type covered by



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FOR EVERY ENGRAVING NEED!

You're bound to be high man when you make your engravings on Zomo-Zinc, the smooth etching general purpose metal – A-Z Alloy, toughest zinc for direct printing and mat making – Zomag, lightweight, "specially-tailored" magnesium – Micro-Metal, superfine zinc alloy for 2-way powderless and conventional etching – and Owl Brand, medium-tempered non-buckling zinc.

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EASTERN

PRODUCTS

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patent 2,013,497 and is adapted for handling pairs of ribbons produced by slitting printed webs. It includes formers for longitudinally folding the ribbons, or where ribbons have been further slitted into two narrower ribbons, for associating them in face to face relation, and a cross associating and folding mechanism including nipping rollers. Patent 2,746,748 by Charles A. Harless, assigned to R. Hoe & Co., Inc.

MEANS FOR SCANNING TRAVELING WEBS IN PRINTING MACHINES

Webs of papers moving at comparatively high speed can be inspected without distortion. This is accomplished by guiding the web into a path having a curvature coordinated with an optical scanner which presents an apparently stationary and distortionless view of the characters on the web. Patent 2,746,749 by William F. Huck, assigned to Huck Company.

ROTARY PRINTING PRESS SHEET TAKE-OFF-DEVICE

For use with rotary intaglio presses such as covered by patent 2,716,548, this take-off-device is fully automatic and is intermittently driven in timed relation with the press. The placement of sheets on a conveyor is also timed with the press. Patent 2,747,503 by Oscar A Fors, assigned to Steelograph, Inc.

REGISTERING MECHANISM FOR ROTARY OFFSET PRINTING MACHINES

The mechanism is for use with the offset printer of patent 2,536,679. The present construction obviates the need of the electric motor used in prior patent and uses a unitary gear and differential device placed exteriorly of the press cylinders so that adjustments can be conveniently and manually made. Patent 2,747,504 by James P. Fay.

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Feeding, Folding, Delivery:

APPARATUS TO MAINTAIN HEIGHT OF A PILE OF SHEETS

A sheet-height detector, operable pneumatically, also controls a pile-raising mechanism from the same pneumatic source as the suckers. Patent 2,746,753 by Alfred Pierssene Battey, assigned to R. Hoe & Co. Inc.

SHEET CONVEYOR

Sheets from a printing press are usually conveyed on a device of the type having two endless chains, pulley, sprocket wheels, and sheet grippers carried by the chains. To make hand inspection of the sheets safe and easier, the conveyor of this invention places the grippers outside the chains. Patent 2,747,870 by Headley Townsend Backhouse.

BOOKLET FORMING MEANS AND METHOD

In combination with a folding mechanism, a pressurized liquid adhesive applicator is used to trace lines of adhesive onto a sheet as it leaves the printing press. The sheet is of the type containing sixteen pages of a booklet which is slit, folded three times, trimmed and bound to produce an eight-sheet, sixteen page booklet. The lines of the adhesive are placed on the edges of pages to be bound before the folding operation. Patent 2,747,865 by Joseph R. Marshall, Jr.

VARIABLE SPEED MEANS FOR WEB FEEDERS

The web feeder is adapted to withdraw a web from a supply roll at near-uniform speed and feed it to a processing apparatus operating at variable speeds without appreciable drag resistance. The feeder is adapted to operate over a wide range of processing speeds without manual or electrical adjustment. Patent 2,747,866 by Edgar H. Schmidt, assigned to E. I. du Pont de Nemours & Co.

SHEET HANDLING APPARATUS

A novel arrangement and construction of sheet conveying and transferring mechanism is used

PATENT SEARCHES
For Patent Research in the U.S. Patent Office, or a prompt estimate on any type of search, write INVENTION, INC.
Munsey Bldg. Washington, D.C.

to effectively advance successive sheets in timed relation first in one direction and then in another direction at right angles. The sheet engaging fingers may be collectively or individually adjusted while in operation. Patent 2,747,869 by Emmon Bach, Edwin W. Goodwin and Richard H. Raunecker, assigned to Dexter Folder Co.

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Binding, Cutting, Perforating:

BINDER CLAMP ATTACHMENT FOR PAPER CUTTING MACHINES

This novel binder clamp, especially useful with very thin paper stock, provides a detachable false plate which is quickly and automatically positioned by the operator from the front of the machine. Patent 2,745,489 by William C. Rupp, assigned to The Chandler & Price Co.

BOOK GLUING METHOD AND MEANS

In an improved method of applying glue to the back edges of books, where a group of them, standing on edge and arranged side by side, are passed over a rotating roller carrying a transferable glue coating, the surface of the roller is scraped to partially remove glue along narrow circumferential bands before the roller contacts the book edges. Patent 2,746,879 by Henry Sieb.

PAMPHLET FORMING MACHINE

A flat stack of printed sheets or signatures is fed to a stitching or stapling machine where the sheets are joined together and then passed to a folding mechanism. The machine can handle sheets of varying length and widths without adjustment of the stapler and can handle a thin stack without crumbling them. Patent 2,747,189 by Orris D. Fenimore.

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Miscellaneous:

ROLLER WASHING APPARATUS

Cloth covered printing rollers are cleaned by placing them one at a time between a pair of cleaning rollers, one of which is power driven so as to progressively power the other rollers. The cleaning rollers are partly immersed in a solvent for cleaning the printing rollers. Patent 2,747,208 by Charles C. Schafer.

APPARATUS FOR WRAPPING MAGAZINES

Addressed wrappers are applied flat and taut to magazines of the pocket type having covers of thick and tough but flexible paper by this apparatus. The apparatus has a sturdy frame carrying a motor and suitable operating mechanism. Patent 2,747,347 by Douglas Hamilton Pope.

PRINTING INK HOLDER AND DISPENSER, INCLUDING A CYLINDRICAL CONTAINER AND PISTON

The peculiar construction of this ink container makes it possible to combine the contents of partially filled cans. Inks of varying consistencies and specific gravities are readily dispensed. Patent 2,745,575 by Alvin C. Spencer.

HOW TO SAVE MONEY ON DROSS LOSSES

First; minimize dross by using type metals free of dross-producing oxides. Those are Federated Castomatic® Type Metals, made by a patented process.

Second; use fluxes judiciously so that the very minimum of good metal — it's always tin that suffers most — goes off in dross.

Third; trade your dross in, pound for pound at a modest cost, for Federated Mor-Tin® metals. Mor-Tin restores your metal to the correct lead-tin-antimony balance and sustains your casting quality.

We shall, on request, send printed matter on any or all of the foregoing subjects. We have also an interesting booklet, "How to Save Money on Type Metals". And there's always a Federated Service Man not far from you who'll be glad to discuss your type metal problems.

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Aluminum, Anodes, Babbitts, Brass, Bronze, Die Casting Metals, Lead, Lead Products, Magnesium, Solders, Type Metals, Zinc Dust

Graphic Arts Meetings

(With Organization Name and Correspondence Officer)

American Photoengravers Assoc. — 1956 Conv., Hotel Statler, Detroit, Mich., Oct. 8-10. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Rm. 430-A, Chicago 4, Ill.

ANPA Mechanical Conf.—1957 Conf., Morrison Hotel, Chicago, June 10-12. Mgr. Richard E. Lewis, ANPA Mechanical Dept., 370 Lexington Ave., New York 17, N. Y.

Book Manufacturers' Institute—1956 Conv., The Greenbrier, White Sulphur Springs, W. Va., Oct. 11-13. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Fifth District Craftsmen's Conf. — 1957 Conf., Brown Hotel, Louisville, Ky., May 17-18. Secy.-Treas. George W. Thompson, Toledo Colortype Co., 1711 Jefferson Ave., Toledo, O.

Graphic Arts Trade Assoc. Executives—1957 Conf., Biltmore Hotel, Los Angeles, Oct. 26-27. Secy.-Treas. W. Floyd Maxwell, LNA, 420 Lexington Ave., New York 17, N. Y.

Gravure Technical Assoc.—1957 Conf., Drake Hotel, Chicago, March 6-8. Exec. Secy. Edward S. St. John, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Newspaper Mechanical Conf.—1957 Conf., Statler Hotel, Cleveland, O., Jan. 13-15. Secy.-Treas. Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press.*

Illinois Newspaper Mechanical Conf. —1956 Conf., Wolford Hotel, Danville, Ill., Sept. 29-30. Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News.*

Intl. Assoc. Electrotypers & Stereotypers—1956 Conv., Chateau Lake Louise, Lake Louise, Alberta, Can., Sept. 5-8. Exec. Secy. A. P. Schloegel, 701 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen—1956 Conv., Biltmore Hotel, Los Angeles, Aug. 12-15. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19, O.

Intl. Graphic Arts Education Assoc. —1956 Conf., Santa Barbara College, Univ. of California, Santa Barbara, Calif., Aug. 5-10. Exec. Secy. Samuel M. Burt, 5728 Connecticut Ave., Washington 15, D. C.

Intl. Printers Supply Salesmen's Guild—1956 Conv., Biltmore Hotel, Los Angeles, Aug. 12-15. Secy. Louis A. Croplis, American Type Founders, 555 Broadway, New York 12, N. Y.

Intl. Typographic Composition Assoc.—1956 Conf., Royal York Hotel, Toronto (Ont.) Can., Oct. 10-13. Exec. Secy. Frank M. Sherman, 1015 Chestnut St., Philadelphia 7.

Iowa Daily Newspaper Mechanical Conf.—1957 Conf., Hotel Hanford, Mason City, Ia., May 4-6. Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conf.—1956 Conf., Town House Hotel, Kansas City, Kans., Sept. 8 and 9. Kansas Secy.-Treas. Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kans. Missouri Secy.-Treas. William A. Bray, Missouri Press Assoc., 220 Walter Williams Hall, Columbia, Mo.

Lithographers National Assoc., Inc.—1957 Conf., The Greenbrier, White Sulphur Springs, W. Va., Apr. 1-3. Exec. Dir. W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Newspaper Mechanical Conf.—1957 Conf., Sheraton Hotel, Philadelphia, Pa., March 21-23. Conf. Dir. Theodore A. Serrill, PNPA General Mgr., 2717 N. Front St., Harrisburg, Pa.

National Assoc. of Litho Clubs—1957 Conv., Palmer House Hotel, Chicago, May 3-4. Exec. Secy. Eugene Hanson, 4440 Bessie St., St. Louis 15, Mo.

National Assoc. of Photo-Lithographers—1956 Conv., Hotel Commodore, New York, N. Y., Sept. 19-24. Exec. Dir. Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Paper Trade Assoc.—1956 Meeting, Conrad Hilton Hotel, Chicago, Ill., Sept. 17-19. Secy. J. H. Longergan, 220 E. 42 St., New York.

National Printing Equipment Assoc., Inc.—1956 Meeting, Statler Hotel,

Flint-Top Halftone Black No. 41200

—You Never Had It So Black!

Howard Flint Ink Co.

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ATLANTA · CHICAGO · CLEVELAND · DENVER · DETROIT · HOUSTON
INDIANAPOLIS · LOS ANGELES · MINNEAPOLIS · NEW ORLEANS · NEW YORK · TULSA

Los Angeles, Calif., Oct. 20-Nov. 1. Secy. James E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Section—1956 Conf., Conrad Hilton Hotel, Chicago, Oct. 24-25. Staff Rep. Arthur Siedlecki, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Composing Room Executives Assoc.—Secy. Lewis R. Green, Westerly (R. I.) *Sun.*

New England Newspaper Mechanical Conf.—1956 Conf., Statler Hotel, Boston, Mass., Oct. 20-21. Secy.-Treas. Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day.*

New York State Capital District Mechanical Conf.—Dir. Floyd Laurenty, Schenectady (N. Y.) *Union-Star.*

Northwest Mechanical Conf.—1957 Conf., Hotel St. Paul, St. Paul, Minn., Feb. 16-18. Secy.-Treas. Ralph N. Carson, Linecasting Instructor, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis, Minn.

Pacific Newspaper Mechanical Conf.—1956 Conf., Biltmore Hotel, Los Angeles, Calif., Sept. 14-16. Secy. Fred Moyer, Sr., 6630 Mayflower Ave., Bell, Calif.

Packaging Institute Assoc.—1956 Conv., Statler Hotel, Cleveland, O., Sept. 10-12. Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17, N. Y.

Printing Industry of America—1956 Conf., Statler Hotel, Los Angeles, Calif., Oct. 30-Nov. 2. Gen. Mgr. Bernard Taymans, 5728 Connecticut Ave., N. W., Washington 15, D. C.

Research and Engineering Council of the Graphic Arts Industry, Inc.—1957 Meeting, Ben Franklin Hotel, Philadelphia, May 15-17. Managing Dir. Robert E. Rossell, 5728 Connecticut Ave., N.W., Washington 15, D. C.

Screen Process Printing Assoc., Intl.—1956 Conv., Sherman Hotel, Chicago, Oct. 19-21. Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6.

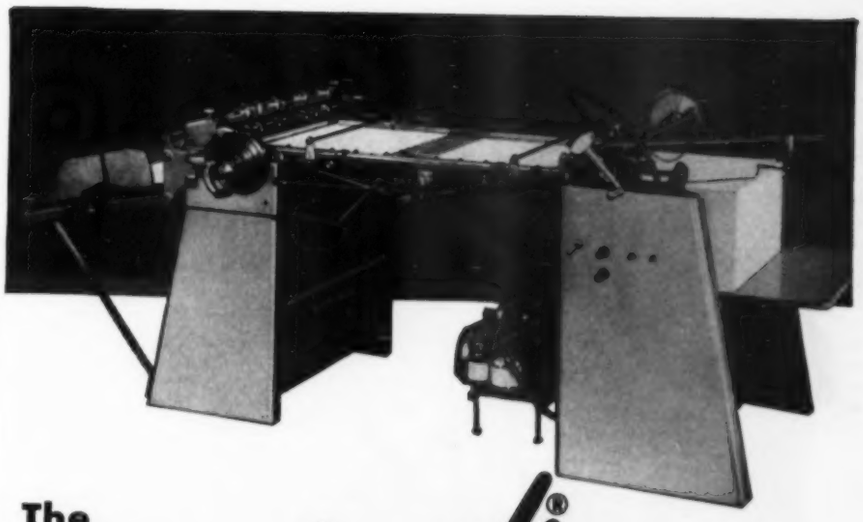
SNPA (Eastern Div.) Mechanical Conf.—1956 Conf., The Dinkler Plaza, Atlanta, Ga., Aug. 19-21. Secy. John A. Hogg, Southern Newspaper Publishers Assoc., P.O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf.—1957 Conf., Hotel Galvez, Galveston, Tex., March 10-12. Secy. Walter Johnson, jr., P.O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assoc.—Secy. Charles E. Kennedy, 1514 South St., Nashville 2, Tenn.

Technical Assoc. of the Graphic Arts—1957 Conf., Ben Franklin Hotel, Philadelphia, May 13-15. Secy.-Treas. Phillip E. Tobias, 140 N. 6th St., Philadelphia 6, Pa.

Keller Company Becomes Branch—As of June 30, 1956, George R. Keller Co., a North Carolina corporation, will operate as a branch of George R. Keller, Inc., Washington, D. C. Announcement was made by George R. Keller, president and treasurer.



The Rosback®
Automatic
Slot Perforating Machine
incorporates BOTH feeder and perforator

Now, for the first time, you can secure a fully automatic slot perforating unit which includes both perforator and automatic feeder built in its entirety by one manufacturer. With this Rosback machine, you are assured *complete responsibility* for satisfactory operation from a *single* source, because perforator and feeder have been designed and built as a team for most efficient production.

Here is a perforator which guarantees you high speed, accurate perforating with high speed automatic feeding for profitable volume output.

A few of the important innovations which are incorporated in the Rosback Automatic Slot Perforating Machine are detailed in the box below. Compare your needs with these unusual advantages—you'll find your answer for meeting today's demands for accurate, high-speed slot perforating. For complete information, write for specification sheet or see your Rosback dealer.

OPERATING ADVANTAGES

Two sizes—30" and 36".

Speed—up to 12,000 per hour.

Feed Table accommodates 24" pile.

Handles stock from 9# manifold to post card weight. Minimum sheet size 6"x6".

Patented pile elevating mechanism extremely sensitive. One adjustment compensates for thick and thin stocks.

Safety disconnect switch stops feeder if pile is exhausted.

Double pump—one for vacuum, one for pressure. Vacuum and pressure regulated independently.

All air controls and stop-start switches directly in front of operator.

Special vacuum valve enables operator to switch quickly from strike to continuous perforating.

Tape section equipped with micrometer side adjustment and simple tape-tension adjustment.

Extension delivery and automatic jogger available as optional extra.

F. P. ROSBACK COMPANY • Benton Harbor, Mich.
WORLD'S LARGEST MANUFACTURERS OF PERFORATORS, WIRE STITCHERS AND PAPER PUNCHING MACHINES

No injuries, no damage

The Accident did NOT happen *thanks to* A.W. ALGRIP *World's only Abrasive rolled-steel floor plate*

No skid!

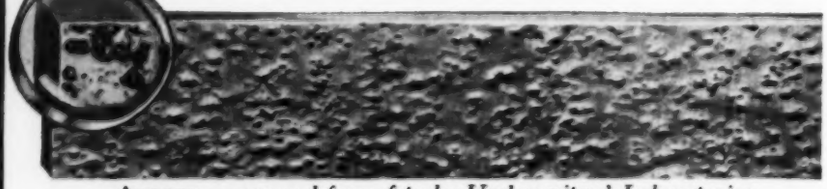
On ALGRIP—under the most hazardous slipping conditions—wheels *and* men's feet hold fast in the powerful friction grip of thousands of abrasive, friction particles.

ALGRIP—made by a patented process—is rolled steel into which a grinding-wheel type of abrasive has been pressure-rolled —*not coated*—to a uniform depth. Wear and tear merely expose more abrasive particles. Overlaid or as a complete flooring requiring minimum maintenance, ALGRIP fabricates easily—soon pays for itself in slashed accident and insurance rates.

Make a test installation in your *worst* slipping area. Watch accident rates tumble and morale improve.

Call or send for detailed booklet today.

A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE



ALGRIP—*approved for safety by Underwriters' Laboratories*

ALAN WOOD STEEL COMPANY
Conshohocken, Pa.

Please send A.W. ALGRIP Booklet AL-30

Name_____

Title_____

Company_____

Address_____

City_____ Zone_____ State_____

Other Products: A.W. SUPER-DIAMOND Rolled Steel Floor Plate—Plates—Sheets—Strip—(Alloy and Special Grades)

NEWS ITEMS

Dassori with Boston *Herald-Traveler* —Frank Dassori was recently appointed production manager of the Boston *Herald-Traveler*. He was formerly press superintendent with the Detroit *Times*. Other associations were

DASSORI WOOD

with the New York *Mirror* and the Baltimore *News-Post*. For two years Dassori represented the I.P.P.A. Union, and in World War II served in the U. S. Marine Corps. Dassori announced the appointment of Wilfird Wood as superintendent of the *Herald-Traveler* composing room. Wood fills the vacancy caused by the death of James P. Quirk. Wood began with the *Herald-Traveler* as an office boy in 1928, later joined the Boston *American-Record* and rejoined *The Herald* in 1940. Part of his Army service was with the Army newspaper, *The Stars and Stripes*.

Harvey F. Mack Dies—Founder and chairman of the board of Mack Printing Co., Harvey F. Mack died on May 29, 1956. Mack entered the printing business in 1900, and in 1905 completed acquisition of the Eschenback Printing Co., predecessor of the Mack Printing Co. Under Mack's leadership the firm grew from one employing 22 persons to one employing more than 600 people and became one of the leading publishers of scientific

Hatch Elected President — Election of Arthur J. Hatch to the presidency and board of directors of The Strong Electric Corp. was recently announced. Hatch joined the engineering staff of the Strong Corporation in 1935 and was elected vice president in 1947. Hatch is a member of the Technical Assoc. of the Graphic Arts Industry.

HATCH

Interchemical Acquires Angier — Interchemical Corporation recently acquired the industrial adhesives business of Angier Products, Inc. The acquisition involves the transfer of

the Angier manufacturing facilities and other properties in exchange for Interchemical stock. Angier has plants in Cambridge, Mass., and Huntington, Ind. Angier will be operated as Angier Adhesives Div. of Interchemical with its present management and staff. Henry S. Bothfeld, president of Angier, will become division president of the unit.

LOHR

Detroit Firms Merge—Two Detroit Graphic Arts firms have merged into a single company, Litho Grainers & Suppliers, Inc., says Marvin R. Lohr, president. The two former companies were Michigan Litho Graining & Supply, Inc., and Litho Plate Grainers of Detroit Inc. Reason for the merger, according to Lohr, was to combine technical knowledge and extended sales coverage for more efficient service. Plant and offices will be at 1241 Tenth St., Detroit, Mich. Vincent D. Galarneu has been elected vice president in charge of manufacturing and treasurer of the new corporation.

HAGGERTY

Haggerty Heads Sales — William F. Haggerty has been named head of the Sales Promotion Dept. of Intertype Corporation. The appointment, effective June 1, was announced by A. T. Mann, jr., executive vice president. Haggerty joined Intertype five years ago as Fotosetter field representative in the Sales Department. He was earlier associated with Quinn & Boden Co., Inc., book manufacturers of Rahway, N. J.

Two Harris-Seybold Appointments—Appointment of Henry H.T.S. Heckman as advertising manager for the Harris-Seybold Co. has been announced by Ren R. Perry, vice president of sales. R. W. Mulcahy, former advertising manager, has been named

HECKMAN

MULCAHY

assistant lithographic product manager for the firm. In his new post Heckman will direct advertising and sales promotion. He was formerly in the industrial advertising field with Republic Steel Corp. As assistant lithographic product manager, Mulcahy will share responsibility for engineering and sales coordination of Harris-Seybold's offset presses. He joined the company in 1953 and has been serving as advertsing manager since early 1955. Prior to that, he was with Addressograph-Multigraph Corp.

Alvin C. Shively, retired sales representative for the Harris-Seybold Co., died recently at his home in Dayton, O., after a brief illness. He was 70. Shively, who had retired about seven years ago, joined the company in 1920. Well known throughout the industry, Shively was an active member of the Dayton Club of Printing House Craftsmen.

BLOMQUIST

Zarkin Appoints Blomquist — The appointment of Herbert W. Blomquist as general sales and promotion manager of Zarkin Machine Co., Inc., was announced by Charles Zarkin, president. Blomquist's duties will comprise administration of the sales of its Graphic Arts Equipment Div. Prior to his present post, Blomquist was active in his own business in the Washington, D. C., area as a Graphic

Engraved on Imperial Zinc 110 Line Screen

WE'D LIKE TO MEET YOUR ETCHER!

Because he makes his visit short and helpful, an Imperial Zinc representative is cordially welcomed by etchers in most plants. If your etcher hasn't met his Imperial representative, introduce them when next he calls. Have him tell your etcher the advantages of Imperial Regular for usual work—Duraplate for extra heavy duty jobs—and Vitaplate, the new, fast etching zinc alloy for the Dow Process. Three great zincs every etcher should meet.

THREE QUALITY ZINCS

Imperial

DURAPLATE VITAPLATE REGULAR

IMPERIAL TYPE METAL CO.

CHICAGO 50 • NEW YORK 7 • PHILADELPHIA 34

Arts equipment consultant and sales representative. He was also a sales engineer with Harris-Seybold Co. Blomquist is vice president of the Washington (D.C.) Printers Supply Salesmen's Guild and a member of the Washington Litho Club.

Two Miehle Announcements — H. J. Byrne, Inc., newly established firm in Rochester, N. Y., recently completed arrangements with the Miehle Printing Press & Mfg. Co. to act as its service and parts representative in western New York State. Announcement was made by Carlton Mellick, vice president of sales at Miehle. Byrne, president of the firm, indicated that services will include erection and maintenance of Miehle press equipment along with carrying a supply of Miehle parts and supplies. Prior to establishing his own

BYRNE NICHOLS

concern, Byrne was associated with the Miehle Company for more than ten years as a sales and service representative.

Another announcement made by Mellick was that William H. Nichols has rejoined the Miehle Company as sales representative after an absence of 14 yrs. Nichols representative the Miehle Company in the New York area prior to World War II.

Litho Company Appoints Timmer —Arthur Moore, president, and Max Gregg, vice president, Gregg-Moore Lithographing Co., announced the appointment of Harold E. Timmer as executive vice president and member of the board of directors of the firm. Timmer was formerly vice president and general manager of Rapid Copy Service, Inc.

TIMMER

3M Technical Director—Appointment of Dr. Carl S. Miller as technical director for Graphic Arts research has been announced by Minnesota Mining & Mfg. Co. Dr. Miller developed the basic principle behind the development of Thermo-Fax Brand copying equipment and paper. A member of the staff of the 3M central research laboratory, Dr. Miller will coordinate all research activities involving new Graphic Arts products. He joined the central research laboratory as a chemist in 1940, and has been a section leader since 1950.

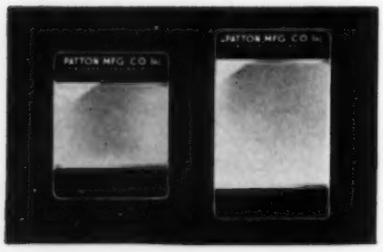
McKEE

Star Parts Representative — Ronald V. McKee has been appointed sales representative for Star Parts, Inc., it was announced by Emil Bendow, sales manager. McKee will cover Texas and Oklahoma for the company. McKee has been employed by Star Parts, Inc. for the past year and prior to that was a Linotype operator at the Northwest Arkansas *Times* and Manhattan (Kan.) *Tribune-News*. McKee studied practical printing and Linotype operation at The Kansas State Teachers College.

Miehle Appoints Heinz — Nicolas L. Heinz has joined Miehle Printing Press & Mfg. Co. as technical publications editor, says F. Irving Walsh, product service manager. Heinz will be responsible for the preparation and production of technical service publications and will serve as technical advisor to the firm's advertising agency. Walsh said the newly created

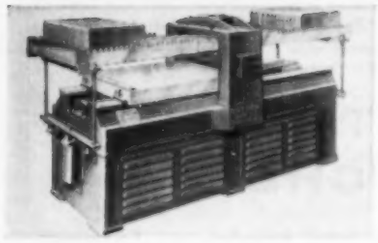
HEINZ

PRECISION PRODUCTS by PATTON



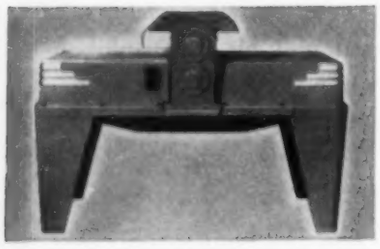
BISHOP CURVING DIE

For dimensional non-stretch electrotype plates. Curves printing plates without heat. Completely eliminates "orange-peel" effect on solid portions of some free curved plates. Color plates are curved to register. Special Swedish steel assures long-life accuracy. (Mfgd. under Bishop Patent No. 2722261)



BISHOP CONSOLEVELER

Consolidates backing metal and levels face of electros by one operation through the machine in seconds. Two models are available. The Model 2000 Consoleveler has the following dimensions: overall 150" long; 50½" wide; 60½" high. Weight 8700 lbs. Size of table 32" wide x 44" long. Model 1000 proportionately smaller with table 18½" wide x 22¾" long. (Mfgd. under Bishop Patent No. 2580723)



PATTON "PLATE-TREATER"

New rotary plate-treating machine, built to highest precision standards and incorporating many improvements that contribute to better quality plates. Has prestressed ball bearings that never need oiling; rollers precision ground to tolerance of plus or minus .0005; reversing switch; new speed reducer with precision-cut gears, etc. Available in two sizes, complete with accessories and factory instruction.

These precision products are being used by electrotypers throughout the country. For more information on how this equipment can make profits for you, call in a Patton Sales Engineer. He will be happy to explain their precision operation and show you how this equipment can help you in your plant. Write today.

PATTON MANUFACTURING CO., INC.
1802 W. PLEASANT ST., SPRINGFIELD, OHIO

job is an effort to offer better and more complete service to Miehle printing press owners.

EBELING

Mendle Elects Vice President—Joseph E. Ebeling, III, sales manager of Mendle Printing Co. has been elected vice president in charge of sales, it was announced by Maurice E. Mendle, president of the company. Ebeling is a graduate of the Publishing and Printing Dept. of Rochester Institute of Technology and has been associated with Mendle since 1950.

Financial Aid for Grace Bullen—The Club of Printing Women of New York has initiated a plan to make it possible to save the widow (Grace) of Henry L. Bullen from a home for destitute women. At present, Mrs. Bullen is living with a widowed sister in a small walkup apartment in the Bronx, N. Y. A small pension which the 86-year-old sister receives is shared with Mrs. Bullen, who has been under the care of a socially minded physician. Mrs. Bullen, over a long period of years, helped Henry Bullen in all of his research activities and did most of his correspondence. Contributions may be sent to Robert L. Leslie who is acting as trustee for Mrs. Bullen. Simply address Robert L. Leslie, c/o The Composing Room, 130 W. 46th St., New York 36, N. Y.

SHAFFER

Macey Sales Manager — Clarence F. Shaffer has been appointed sales manager of The Macey Co., Sub of Harris-Seybold Co., as announced by Keith S. Macey, president. Shaffer was with Pitney - Bowes, Inc. for 17 years.

Two Patton Appointments—Charles E. Hill has been appointed chief engineer of Patton Manufacturing Co., Inc., Springfield, O., as announced

HILL

CRANNELL

by George S. Herbert, vice president. Hill was formery assistant chief engineer of Pusey-Jones Corp. It was also announced that Wayne T. Crannell, formerly acting chief engineer and sales manager, will now devote full time as sales manager of the paper mill division. Crannell has been associated with Sandy Hill Iron and Brass Works, Black-Clawson and Midwest-Fulton.

PDI Expands Facilities—Printing Developments, Inc., distribution organization for Time and Life's Springdale Research Laboratories, has announced expansion plans which include the building of a quarter million dollar electroplating plant and the establishment of two additional Scanner Studios. According to T. A. Dadisman, vice president of Printing Developments, Inc., the plant will be located in Racine, Wis. Completion is scheduled for mid-1957. Additional color scanner studios are being established in Chicago and San Francisco. They will supplement electronic color separation work now being done by the Time and Life Color Scanner in Stamford, Conn. Contracts are now held with both the Intl. Photo-Engravers' Union and the Amalgamated Lithographers of America.

News Pictures at Sea — Successful operation of the first seagoing Scan-A-Graver electronic engraving device aboard the Italian Line's Cristoforo Colombo has resulted in the installation of a second machine aboard the sister ship, Andrea Doria, it was announced recently by Fairchild Graphic Equipment, Inc. The first Scan-A-Graver, a Cadet model, was installed on the Cristoforo Colombo in December 1955 and has been used to produce

New! Inexpensive!
The VANDERCOOK 14-19
PLATE MOUNTER

A ruggedly constructed and simple to operate machine for mounting letterpress plates on Vandercook Lite-Base, wood, or any other mounting material—using heat and pressure, plus a suitable adhesive film or compound.

Operation of the new Vandercook Plate Mounter is extremely simple, and anyone can be taught to expertly mount plates in short time.

Heat is controlled by a thermostat with a range of adjustment from 200 to 550 degrees. A timer is provided for timing the bonding and plate removal cycles.

The Vandercook 14-19 is available either with or without the storage cabinet. Write for a descriptive circular.

VANDERCOOK & SONS, INC.

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Eastern Office & Demonstration Room
323 E. 44th St., New York 17, N.Y. Phone: MUrray Hill 4-4197
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In Canada, Sears Limited

you get
EXTRA ADVANTAGES
with
Imperial

and sharper
type reproduction

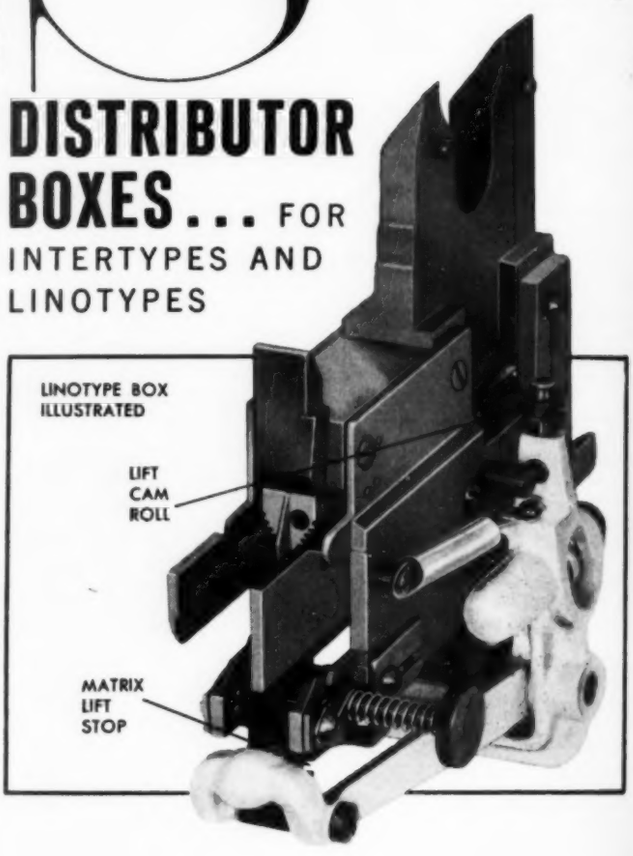
Put your glass on the printed result. That's one of the best ways to judge type metal. Everyone knows type metal contains lead, tin and antimony, but only Imperial with 43 years specialization in printing metals knows how to alloy these ingredients into Imperial's famous type metals that "get" every detail in the matrix to give you crisp, brilliant type reproduction.

This Imperial "know-how" is but one of the "extra advantages" that benefits the plant standardizing on Imperial Metals. For further details, won't you please write us?

IMPERIAL
TYPE METAL COMPANY
Imperial
PHILADELPHIA 34 • NEW YORK 7 • CHICAGO 50

2 MORE IMPROVED
ADDITIONS TO THE
Star Parts line!

DISTRIBUTOR
BOXES... FOR
INTERTYPES AND
LINOTYPES



Both boxes carry improvements not previously available. For the first time, the Linotype box has an easily removable matrix lift cam roll, making it a quick job to replace the roll and stud when needed. And another Star first . . . the Intertype box has an automatic stop for the matrix lift, eliminating unnecessary motion and wear when there are no matrices in the box. These improvements are available in both styles of box. Can be applied to all single distributor machines. Economically priced . . . when ordering, specify model and whether fast or slow screws.

Try **STAR SLIC.** It's the answer to keeping molds clean without rubbing.

BRANCH
1327 BROADWAY, KANSAS CITY, MO.
AGENCIES
CHICAGO • MINNEAPOLIS
LOS ANGELES • DENVER • BOSTON
CANADA: SEARS LTD. AND AGENTS OVERSEAS

STAR PARTS, Inc.
REGISTERED TRADE MARK
SOUTH HACKENSACK, N. J.

halftone engravings for the ship's newspaper since that time. The installations on the two ships enable readers of the ship's newspaper to view spot news photos just as soon as readers of land-based newspapers.

Hamilton Names Hawkins — The appointment of R. C. Hawkins as sales representative for the company's Professional and Industrial Divisions was announced recently by W. A. Friedrich, vice president in charge of sales of the Hamilton Manufacturing Co. He will represent Hamilton in Pennsylvania, Maryland, Delaware, District of Columbia, Virginia, West Virginia, and Southern New Jersey. Hawkins was formerly with a dental supply house in Philadelphia.

HAWKINS

DOYLE

The Dexter Folder Co. announced appointment of James E. Doyle to the sales staff of its Chicago office. Doyle served as officer-in-charge of the secret Pentagon printing plant during World War II.

Hoe Signs Agreement with M.A.N.— R. Hoe & Co., Inc., recently announced the signing of a contract with M.A.N. of Augsburg, West Germany, enabling Hoe to market a variety of M.A.N. printing equipment. M.A.N. equipment to be offered by Hoe includes automatic and semi-automatic plate casting and finishing machines, three sizes of hydraulic presses for mat and plastic molding, a curved plate shaving machine, flat

and curved routing machines, a straight edge trimming machine, web offset presses and narrow width web fed rotogravure presses. Hoe plans to maintain a stock of parts and will service the machines it sells. The first semi-automatic plate casting machine is scheduled for delivery by Hoe to the Tenafly Printing Corp. in the fall. Pictured is Hoe Pres. Joseph L. Auer signing M.A.N. agreement.

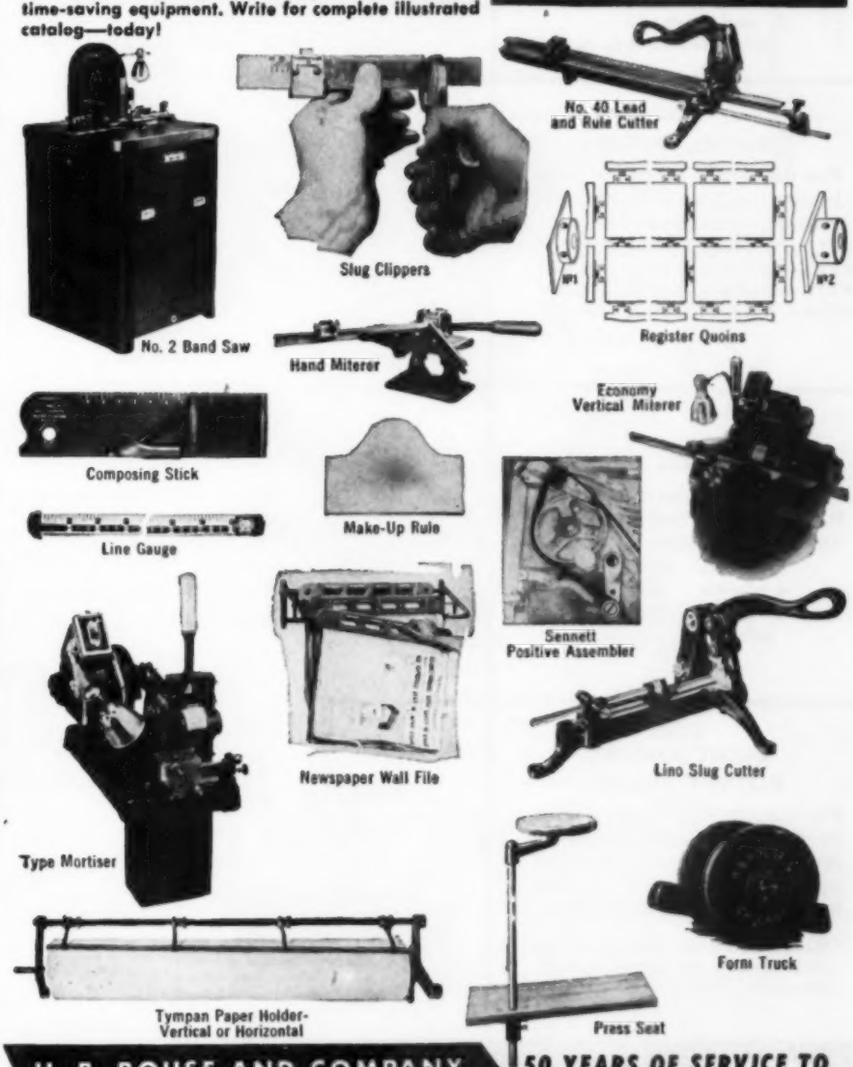
District Sales Managers Named—Ren R. Perry, vice president of sales, confirmed promotion of three new managers to major Harris - Seybold Co. sales districts in the East and South. They are: Herbert A. Asten, Philadelphia District manager; Arthur L. Olney, Northeast District manager, with headquarters in Boston, and Eldren P. Nalley, Southern District manager, with headquarters in Atlanta, Ga. Asten, formerly Southern District manager, has been serving in the capacity of Philadelphia District manager since last September. Olney has been acting district manager in the New England area since last July. Nalley has been acting manager of the Southern District since last September.

ASTEN OLNEY NALLEY

PRACTICALLY EVERY PRINTING PLANT IN THE WORLD USES ONE OR MORE OF THESE

Rouse PRODUCTS

For absolute accuracy and extra profits, order Rouse time-saving equipment. Write for complete illustrated catalog—today!



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2214 NO. WAYNE AVE. • CHICAGO 14, ILLINOIS

50 YEARS OF SERVICE TO THE PRINTING INDUSTRY

Pick a

WETTER

and always get...

- Perfect Number Sequence
- Clean, Sharp Impressions
- Crisp, Accurate Register

NONPAREIL MODEL

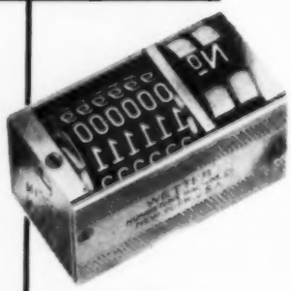
For general use on large diameter cylinder, bed and platen type presses. Roman or Gothic figures.

5-wheels—$24.00*
6-wheels— 26.00*
7- and 8-wheels—prices on request

MIDGET MODEL

For use where room for numbering machine is limited i.e. stamps, coupons, tickets, etc.

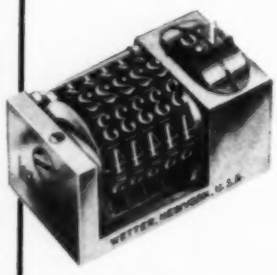
#115—5-wheel Roman $37.00*
#223—6-wheel Roman 40.00*
#116—6-wheel Gothic 40.00*
#224—7-wheel Gothic 44.00*



LOCK-WHEEL MODEL

For small diameter cylinder, high-speed presses. Roman and Gothic figures.

5-wheels—$29.00*
6-wheels— 31.00*
7- and 8-wheels—prices on request



RIGHT ANGLE ROTARY MODEL

For numbering at right angles to the impression cylinder. Available also for parallel operation. Gothic and Roman figures. Prices on application.

*Removable slide plunger $1.00 additional—all prices F.O.B. Brooklyn, N. Y.

1801

WETTER NUMBERING MACHINE CO.
ATLANTIC AVENUE & LOGAN STREET · BROOKLYN 8, N.Y.
ONLY UNION MADE NUMBERING MACHINE IN U.S.A.

STATIC!

SIMCO MAKES A BAR FOR EVERY PRINTING STATIC CONDITION!

1 METAL ENCASED STATIC BAR

Has the highest possible efficiency of any static bar sold. Designed in a wide range of diameters and lengths.

2 CHANNEL STATIC BAR

Has same high ionization and low cost of operation as metal encased bar. It's easily cleaned . . . preferred for use in dirty places.

3 SHOCKLESS STATIC BAR

This bar is safe in explosive atmospheres, yet highly effective. Points are completely shockless when they are touched.

Each SIMCO "Midget" is *guaranteed* to be the most effective, least expensive static eliminator of its type available! Send coupon now, for complete information.

the SIMCO company
920 Walnut Street, Lansdale, Pa.

SIMCO COMPANY PE
920 WALNUT STREET
LANSDALE, PENNA.

Please send me information about the SIMCO "Midget".

Company .....
My name ..... Title .....
Street .....
City ..... Zone ..... State .....
Type of machine: .....

Literature

(Continued from Page 36)

Cylinder Production Order form are illustrated. Physical constants of commonly used gravure solvents are listed. A glossary of terms used in reference to gravure inks is also included. For a copy, please mention PEE No. 180L in your request.

AUTOMATION IN BOX MAKING

A description of the Staude "1000" series rotogravure press and Mercury reciprocating blanker installation at the Ohio Boxboard Co., Rittman, O., is given in a six page magazine reprint. Several pictures taken at the Ohio Boxboard plant are used to illustrate the article. Advantages and disadvantages of the installation are enumerated. For a copy, please mention PEE No. 181L in your request.

COLOR SEPARATORS

Dayco Color Separators for newspaper printing units are illustrated and described in a four page brochure released by The Dayton Rubber Co. Dayco Separators are designed to fit most newspaper presses and provide separation of the colors using all types of inks. Installation information and features of the separators are included in the brochure. For a copy, please mention PEE No. 182L in your request.

PHOTOGRAVURE ROTARY PRESS

The Goebel Darmstadt Regina photogravure rotary press is the subject of a four page brochure released by George F. Motter's Sons. Technical data is included and design features are illustrated and described in the brochure. Some of the features are: Drying chamber beneath the units, doctor blade and design cylinder easily accessible, printing units and paper web enclosed. Materials handled are paper, Cellophane, coated metallic foil and cardboard according to suppleness. For a copy, please mention PEE No. 183L in your request.

Bindery

HYDRAULIC CORNER CUTTER

A six page folder has been released by Craftsmen Machinery Co., Inc. in which is described its Hydraulic Round Corner Cutter. The hydraulic clamp and cutter are illustrated and specifications are given. Also included in the bulletin are descriptions of the Craftsmen pedestal and bench corner cutters. One page is devoted to the Craftsmen Company selection of knives with diagrams which illustrate the various styles. For a copy, please mention PEE No. 185L in your request.

QUADRUPLE BOOK FOLDERS

The Dexter Folder Co. recently announced a six page bulletin in which is covered its Model N Quad and Duplex Quad book folders. In the two color brochure is included overall illustrations of each model and such operating data as maximum and minimum size sheets that can be folded, maximum and minimum sizes of signatures formed, number of signatures delivered per hour, etc. On a concluding page is given floor space diagrams, electrical specifications and shipping data for both models. For a copy, please mention PEE No. 186L in your request.

STITCHING WIRE GUIDE

A one page color selection guide for colored stitching wire has been made available by Acme Steel Co. Color chips on the chart can be used to match, harmonize or contrast Colorstitch Stitching Wire with colors of fibre display or shipping boxes. Samples on the chart indicate the 12 shades in which Colorstitch is available. For a copy, please mention PEE No. 187L in your request.

Miscellaneous

MAGNETIC MOTOR STARTER

Cutler-Hammer, Inc. has released a four page bulletin in which the several new features of its Bulletin 9586 a.c. magnetic motor starter have been included. The bulletin, called *The Starter Which Staggered the Imagination*, is well illustrated, and descriptions of the new features are included. For a copy, please mention PEE No. 190L in your request.

PHOTOCOPYING MACHINE

A case history bulletin on the use of a Rectigraph photocopying machine by General Mills, Inc., Minneapolis, Minn. has been released by The Haloid Company. How General Mills uses the machine for paperwork, for reports of all kinds, organization charts, advertising layouts, engineering drawings, accounting sheets, etc., is illustrated and described in the brochure. For a copy, please mention PEE No. 192L in your request.

HISTORY OF LABELS

The use of labels is covered in a 52 page booklet prepared by the Allen Hollander Co. In the booklet, titled *History of Labels*, is a record of the primitive usages of labels from early times to the beginnings of our present marketing age. Also included are anecdotes and references to labels culled from many sources. The booklet is amply illustrated with samples of old labels. For a copy, please mention PEE No. 193L in your request.

WEATHER CONTROLS

Modern Control of Building Temperatures from Outdoors is the title of a four page illustrated bulletin issued by Automatic Devices Co. The manufacturer's line of outdoor type automatic heat controls is illustrated and described. Three classes of weather controls available are: Time switches set automatically by outdoor weather; controls in which outdoor temperatures automatically regulate the hours of building heat generation and the rate of heat flow; controls which alter the heating system's temperature of water or air as the outdoor temperature changes. For a copy, please mention PEE No. 194L in your request.

CYCLIC TYPE LUBRICATORS

Automatic, cyclic type lubricators that are built to provide metered oil feed by a me-

COMPOSITORS! PLATEMAKERS!
Add Savings and Profits with these MORRISON Modern Time-Savers!

MORRISON SAW TRIMMERS

Morrison Model 3-A

A high speed, highly versatile saw trimmer designed for great strength and durability. Features include: Behind-the-Gauge Workholder, 73-Pica Gauge, 135-Pica Swing-Out Extension Gauge, Miter and Line-Up Gauge, Right and Left Hand Miter Vise, Saw Grinding Attachment with Universal Saw Blade, Emery Wheels, Trimmer Grinder, Waste Receptacle, Motor.

Morrison Model 45

WITH FAST PISTOL-GRIP SAW ADJUSTMENT

Designed for medium-sized plant, with many features of Model 3-A. Capable of high speed production, extreme accuracy and versatility to match the needs of most composing rooms.

MORRISON Special SAW TRIMMERS

BENCH MODEL CABINET MODEL

Compact, low-priced, capable of amazing variety of work, designed for smaller plants where space is limited. Have many features of higher priced models, with many parts and attachments interchangeable.

Morrison Slug Strippers

Simplify plate and type corrections without mortising

CABINET MODEL BENCH MODEL

Valuable time-savers in any composing room. Cut Linotype, Intertype, Ludlow or APL Slugs, or single type, to any height required, from 0.065" to 0.105" or 0.152". Handle slugs ranging from 1 to 72 points, and up to 30 picas in length. Simple and safe to operate.

Morrison Router and Type High Planer

with Exclusive Micrometer Height Gauge

Double-duty machine, providing accuracy and speed in routing, plate corrections, type-high planing for composing rooms, engraving plants, electrotype foundries.

Morrison Plate Beveler

Important for engraving plants, the Morrison Plate Beveler cuts perfect burr-free shoulders on any square engraving in seconds! Safe, works from *edge* of plate, not top; no possible contact between cutters and fingers, no flying chips. Soft leather protects plate face.

Prove MORRISON Savings in your plant! Write or wire for prices and details.

OTHER MORRISON EQUIPMENT: Strip Material Cabinets, Waste Receptacles, Universal Saw Blades, Router Bits, Jig Saw Blades.

THE *Morrison* COMPANY
PRECISION MACHINES FOR THE GRAPHIC ARTS INDUSTRY
135 W. MELVINA STREET • MILWAUKEE 12, WIS.

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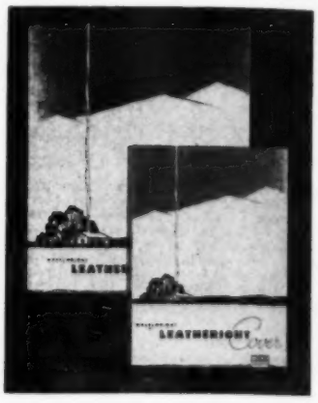

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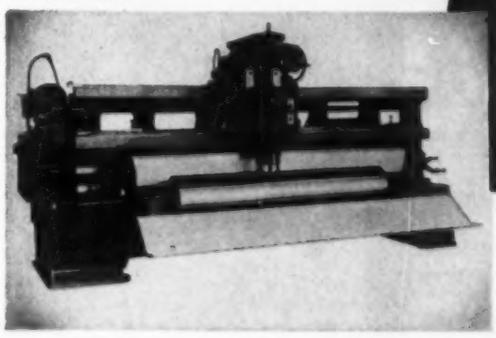

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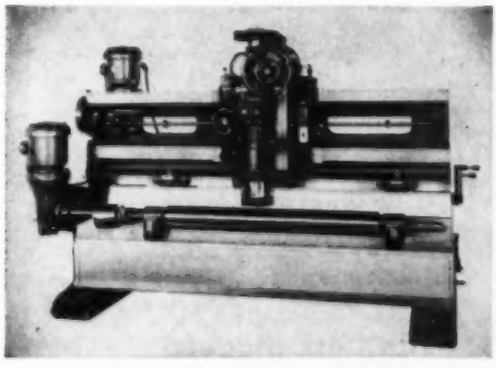

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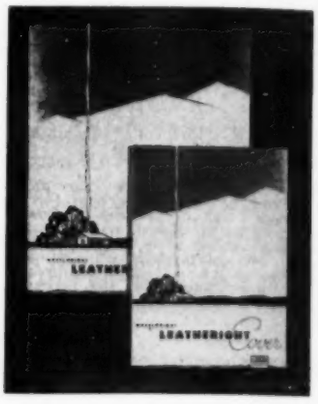

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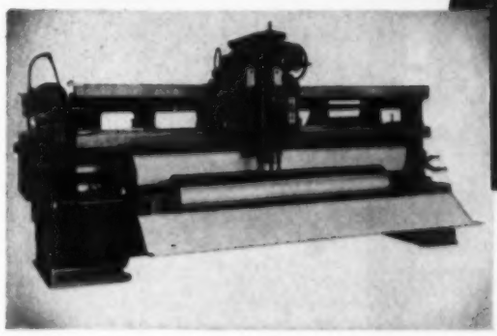

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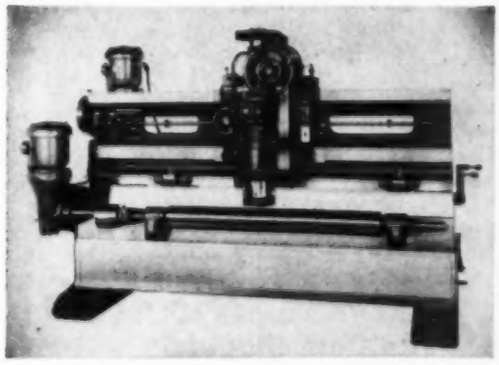

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BOOKS

Duplicator Techniques

The second revision of *Offset Duplicator Techniques* by Caruzzi, Hoch and Harris, is completed and ready for distribution.

The original edition of this book was by Richard Caruzzi. The first revision by Carl Harris and Fred W. Hoch, was published in 1951. This second revision, which is the third edition of the book, is revised to include current industry progress on paper plates, pre-sensitized plates, and additional information on the three color process. The new Ditto Offset Duplicator L-10 with Magnamatic keyboard control, and the A. B. Dick Offset Duplicator Model 350 with Aquamatic Control are shown. Headliner equipment for photographic display composition is also shown. Illustrations of Coxhead Liner, Filmotype and Typro composing equipment are included.

Offset Duplicator Techniques, Second Revised edition, size 8½ in. by 11 in., contains 96 pages, 140 illustrations, an index of 487 cross references and a 263 glossary of trade term explanations. It is Case bound in Kivar over-boards. Available from *Printing Equipment Engineer*, for $5 a copy plus 25c postage.

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With Exclusive Automatic Feed
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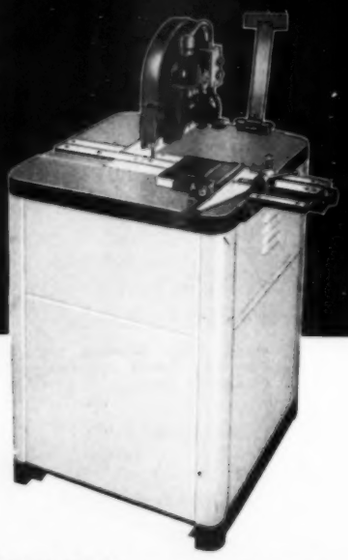

No more manual squaring up, guesswork alignment, tacking, scoring, beveling, trimming, removing burrs, using wedges. That's how a Rouse Plate Saw soon pays for itself.

Just make 4 quick, easy, automatic saw cuts and your plate is ready for the printer. The *exclusive* automatic feed guarantees each cut to be perfectly square, smooth-edged and uniform on any copper, zinc, magnesium or plastic plate, whether wood or plastic mounted or shellcast.

Cuts are made to Picas, Points, Quarter Points or Inches as required. Outside Mortising is effectively done to pica and point measurement.

NEW 24" MODEL—automatically cuts up to 24" of type-high work in only 27 seconds.

15" MODEL—identical to 24" Model except it automatically cuts up to 15" of type-high work in only 17 seconds.

BOTH MODELS occupy only 26" x 26" floor space.

NEW FEATURES (on Both Models)

1. Now you can make *cuts as small as 1 Pica square* for signatures, key letter or number changes, etc.
2. *Narrow Cut* measures about 2 points (.028"), permitting cutting between type lines.
3. Saw blades are changed in just 1 minute due to new lever-operated tension release. Blades stay sharp during 30-40 hours continuous operation. New blades are inexpensive.
4. New simplified gauge adjusting device makes it easier to maintain perfect squareness in cutting.

DESIGNED BY MEN WITH 25 YEARS KNOW-HOW IN BUILDING BAND SAWS FOR PRINTERS

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ROUSE PRODUCTS...The Standard of the World Since 1899

Screen Process Printing

Vocational education and industrial arts instructors who teach screen process printing now have an opportunity to obtain a screen process manual. The special aid was prepared by the Vocational Development Committee of the Screen Process Printing Assoc., Intl. In the 64 page manual, titled *Screen Process Printing*, material covering art preparation for screen process printing, how to build equipment, materials needed and the various methods of screen process printing is included. All sections are well illustrated and the descriptive material is comprehensive.

In the art preparation section, practical screen processors such as Kaye Loomis submitted articles on preparation. Loomis wrote on the knife-cut stencil method; Roman Miloszewski and Franz Weiss wrote on the tusche and crayon stencil method, and John Sankey wrote on the photographic stencil method.

One section of illustrations was prepared to show examples of original art work, both in the rough and partially completed, as is usually submitted by the advertising agency for printing, as well as examples of the printed job.

Diagrams and specifications for constructing equipment are given in the manual, such as frames, drying equipment and wash racks.

Committee Chairman Bert Zahn announced that copies of the manual may be obtained by teachers by contacting the SPPA, International Executive Office, 549 W. Randolph St., Chicago 6, Ill. All requests should be on official school stationery.

Source Material On Graphic Arts

Prof. George J. Mills of the Carnegie Institute of Technology School of Printing Management has revised and enlarged his guide to sources of information in the American Graphic Arts industry. This new 64-page book is titled *Guide to Films, Periodicals, and Books in Printing, Paper, Publishing, Printed Advertising, and Their Closely Related Industries.*

Professor Mills, for the purposes of this book. has defined the Graphic Arts industry as the mass reproductive Graphic Arts, including relief printing, lithography, intaglio printing, silk screen printing, photoengraving and similar processes. The book is divided into three sections: The first listing motion pictures and film strips; the second listing periodicals; and the last listing books.

The film section is grouped into 28 categories, ranging from Advertising and Art Work to Letterpress Presswork to Xerography. Under each category, films are listed by title of the film, date of issue, type of film or film strip, size and color (if any), description of subject matter, and source.

There are over 100 periodicals grouped into seven categories in the periodicals section. These categories include Advertising, Management and Education, Packaging, Paper, Photography, Printing Processes, and Publishing. These periodicals are listed by title, frequency of publica-

tion, publisher's address, and subscription rate, if any.

The books section is classified three ways: By author, by title and by subject. The subjects are divided into 34 categories, ranging from Advertising to Management, Law, Labor, Industry, and Government Publications to Wood Block Printing. There also is a listing in this section on bibliographies.

Professor Mills notes that very few of the sources listed are older than 1945. Canadian and British publications and books which are readily available in this country are also included in this guide.

Copies are available for $2 each from Prof. George J. Mills, School of Printing Management, Carnegie Institute of Technology, Pittsburgh 13, Pa.

LTF Litho Abstracts

Abstracts of current articles on lithography in the trade and scientific journals and patents recently granted as prepared by the research department of the Lithographic Technical Foundation have been published in booklet form. The publication covers the period from September, 1954, through July, 1955. Available also are monthly installments of LTF abstracts for September, 1955, and October, 1955.

The abstracts cover a wide range of subjects: Photography, planographic processes, paper and ink, Lithography, and a general catagory which includes anything of interest to offset printers. A sampling of specific articles which have been abstracted includes: *A Method for Determining Areas of Equidensity in Photographs,* by H. B. Archer and W. L. Rhodes, *Photographic Science and Technique; Method of Printing,* J. P. Costello, *Official Gazette* 689; *The Ink Transfer to Paper in Printing,* by I. Olsson and L. Pihl, (in Swedish, abstract only in English); *The Technology of Paper Coating, Paint, Oil and Chemical Review;* and *Photocomposing Machine,* James C. Plastaras, *Official Gazette* 687. The monthly installments cover similar material for the months designated.

Copies of the booklet are available to members of LTF for $1.20 a copy. Copies of the monthly installments are available to members of LTF for $.30 per issue or $3.30 per year ($1.00 per issue or $11 per year to nonmembers of LTF).

Welding Data

Since so many Graphic Arts plants do welding for repair and maintenance of equipment, we want to pass along to our readers announcement of the *Welding Data Book,* published by Eutectic Welding Alloys Corp. This is a 140 page pocket (5 in. by 4¼ in.) containing information on uses, procedures and characteristics of Eutectic's 120 welding rods, electrodes and welding compounds for all base metals. "How-to-weld" information is given for fabrication, maintenance repair and salvage, overlaying for wear and corrosion resistance and welding of dirty, rusty parts. Data also are given on methods of gouging, chamfering and removing of unwanted metal without special equipment.

Hundreds of applications for welding are described. The Eutectic Pocket Data Book is designed to help shop foremen, purchasing agents, and welders determine new possibilities for saving time and money with easier, improved welding.

A copy of the book is available gratis from Technical Information Service, Eutectic Welding Alloys Corp., 40-40 172nd St., Flushing 58, N. Y., or from any of Eutectic's 350 district engineers.

Safety Manual

The National Safety Council has published a new and expanded edition of *Accident Prevention Manual for Industrial Operations.* Designed as the basic text for the safety man's shelf, this 3rd Edition of the manual includes most of the information needed to organize a safety program and keep it going. In addition there are chapters covering the specific types of hazards found in many industrial operations. The manual contains 1341 pages. The new edition contains 43 sections, 17 of them completely new and the others revised and brought up to date. Instructions for setting up safety committees, maintaining interest in accident prevention activities and developing favorable publicity and public relations are included. There are chapters on accident records and injury rates, accident investigation and costs and workmen's compensation insurance. There is technical infor-

CRAZY BUSINESS

(Abstracted from address delivered by Harvey Schwandner, editorial department, Milwaukee (Wis.) *Journal,* before Great Lakes Mechanical Conference, Milwaukee, January 1956.)

"Sometimes I think the newspaper business is crazier than trying to sell ready mixed martinis at a meeting of abstainers.

"You get 10 sq. ft. of ice on Highway 57 near Green Bay and our circulation boss calls up and says: 'Maybe we ought to go in a half hour early.'

"We got an Eisenhower text at 10 o'clock one morning and Production Mgr. Joe McMullen says wistfully: 'It would have been nice to have had that yesterday afternoon.'

"The latest edition comes up with some pages upside down and the pressroom says: 'Why those doggone stereotypers have cast the plates upside down again.'

"We print on toilet paper and expect to get magazine reproduction—and sometimes we even get close!

"The paper in the pressroom tears and Pressroom Supt. LeRoy Schulz says it's the paper and ink—not his beloved presses."

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mation on subjects such as pressure vessels, handling materials, conveyors, machine tools, welding, portable power tools, electrical hazards, flammable liquids and many others. The *Accident Prevention Manual* is priced at $13.50 per copy and may be purchased from the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

History of Printing

Five Hundred Years of Printing by S. H. Steinberg traces the development of the technical process of printing and of type design from Gutenberg to the present in 277 pages. The roles of individual printers and publishers; the varying importance of presses, places and countries; the realtionship between publisher and author, publisher and public, author and public are treated against the background of the centuries. Also touched upon are special problems such as censorship, best-sellers, popular series, and the connection between printing and education. Included in the book are 32 pages of plates of title pages, engravings, printers' devices, and type specimens.

This comprehensive history of printing is available in this Penguin Books edition for 85c per copy from bookstores or it may be ordered direct from Penguin Books, Inc., 3300 Clipper Mill Rd., Baltimore 11, Md., for a 5c additional charge for each book ordered for mailing and handling.

371 Electro Plants in U. S.

There are 371 electrotype and stereotype producers in the United States, according to a new directory just published by the Intl. Assoc. of Electrotypers & Stereotypers, Inc. Seventy-four are private or captive plants, leaving a total of 297 commercial plants. New York state leads with 71 producers, 15 of which are private plants. Illinois is second with 48 and 12 followed by Ohio with 38 and 8, Pennsylvania with 28 and 9, and California with 26 and 6. Members of the International Association, employing 3569 production workers, account for 80% of the commercial electrotypes and stereotypes produced in the nation. The industry volume in 1955 was more than $90 million.

Increased Plasticity In Steoreotype Matrix

During the latter part of March, a U.S. patent was granted to Russell R. Eichmeier, assignor to Burgess Cellulose Co., Freeport, Ill. The principal object in formulating a stereotype mat as covered in the invention is to provide a mat of increased plasticity when moist so as to receive with a minimum of pressure and without fracture ". . . a full, exact and faithful impression of the type,

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unless you look into this NOW, we won't be able to make deliveries before the snow flies, owing to the unprecedented demand for these fabulously-improved Folders of 1956.

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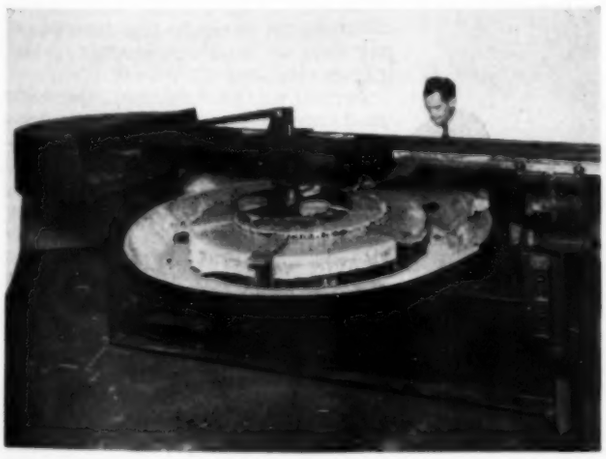
halftones, illustrations, etc., from the metal type form and to retain this impression without change during the casting operation whereby a stereotype plate is formed which is an exact and faithful duplicate of the original form."

Other objectives claimed in the Eichmeier patent are: (1) Full amount of strength for mats of this general character which undergo the normal amount of shrinkage while being dried; (2) A mat in which moisture is more readily released during drying of the molded mat so that the mat is more quickly and easily rendered completely dry; (3) The molded and dried mat possesses increased flexibility without sacrifice of strength or toughness whereby it more readily conforms to the casting box curvature.

These objectives, it is stated, are attained by incorporating in the body of the mat a finely divided precipitated alkaline earth metal silicate. The body consists of a co-felted mixture of cellulose fibres and discrete particles of a filler. That is, a chemically precipitated silicate of barium, calcium, magnesium, or strontium.



Big One for Sta-Hi —What is believed to be one of the world's largest commercial glass grinding and polishing engines was especially built by Sta-Hi Corporation, for grinding and polishing the precision mirrors used in the Sta-Hi Master Matcher. This is the stereotype mat color registering machine. The equipment pictured here is in operation in the plant of Bray Optical Co., Los Angeles.

Electronics

(Continued from Page 64)

5 in. by 7 in. to 11 in. by 14 in. Printing plates may be made from them with a substantial overall saving in time and with greatly improved color reproduction.

A very brief description of how these results are obtained will be interesting and can be set forth by referring to an article entitled ***All Electronic Color Correction for the Graphic Arts*** by J. S. Odell of the Industrial Products Section of the Radio Corporation of America in the *RCA Engineers' Digest*. In preparing a typical set of three color photo-engravings by the conventional so-called indirect process, the first step is the photographic one of "separating" the original. It consists of making three different exposures serially or simultaneously through, red green and blue filters respectively. These are processed and produce three black and white continuous tone negatives or "separations", representing the red, green and blue in the original. These three colors are selected on the basis that all colors except the purest spectrum colors can be rep-

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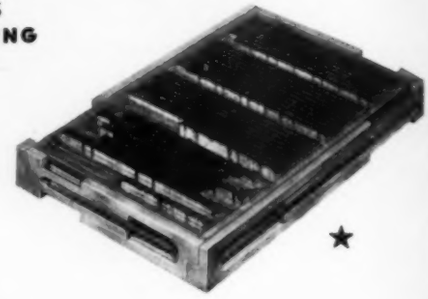

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resented by mixtures of these primary colors. As there is no known set of filters which allows the photographic plate to respond to colors similarly to the human eye and is also able to regulate properly the amount of printing ink laid down in the final printing, the effort is made to secure a set of filters which reduces the time required for the subsequent operations.

The second step is to dissect each of the photographic separations into a million or more very small dots. The need for this is due to the impossibility, in most methods of printing, of varying the thickness of a layer of ink so as to show all the tones from darkest to lightest. The best practical method to secure the differences in tone is to vary the size of the dots and keep them so small that they cannot be detected by the eye at normal viewing distances.

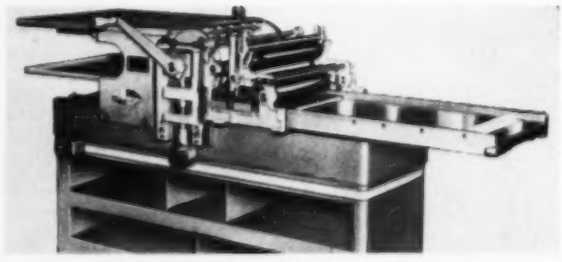
This is done by converting the three negatives into positives by contact printing. They are then rephotographed in a camera with a crosslined screen close to the negative to be exposed, which must have very high contrast. This breaks up the tones of the positives with black dots with areas varying inversely with the densities of the positive.

The third step is to contact print the "dot" negatives on copper plates coated with a "resist" which is water soluble until rendered insoluble in water and the etching solution by the action of light. The plates are developed with a water treatment to dissolve the portions of the coating not exposed to light and are then etched with ferric chloride to deepen the unexposed portions enough to prevent printing on the press.

Printing ink colors commonly used are cyan (blue-green), magenta (red-blue) and yellow (red-green). If the inks were perfect, an unbroken area of blue-green ink, for example, would transmit all the blue and green light and absorb all the red light reflected by the white paper. In other words the relative size of the blue-green dot would control the amount of red reflected to the eye. A small dot would allow most of the red to be reflected. In generating the dots for the plate to be printed with blue-green the red filter negative is used and the process is such that

---

Challenge Proof Press—The Proof Press Model GP, designed for taking reproduction proofs, was announced recently by The Challenge Machinery Co. The floor model press can also be used for the direct image proofing of forms for duplicators or small offset presses directly on paper or metal plates. Sponsor claims that forms with type, line cuts and even halftones can be proofed directly on the press and then run directly on duplicators or small offset presses. Features of the GP unit are automatic grippers, automatic cylinder trip and power inking. Manual control of the trip and grippers is also provided. Forms up to 14½ in. by 23½ in. can be accommodated. The press is equipped with the 0.040 in. hard packing and type high bed. A bed with a galley thickness plate is available on special order. Micrometer feed and side guides are supplied. Uniform ink is provided by a power driven ink agitator with a 2½ in. lateral movement. Another feature is the Challenge tip-out roller system which enables the operator to wash-up without removing the rollers from the machine. For further details, please mention PEE No. 191 in your request.



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a heavy red area results in a small green dot in the final plate. In the same way the size of the red-blue dot, made from the green filter negative, determines exactly the amount of green perceived, and the size of the red-green dot governs the blue, if the inks were perfect.

However, no practical set of inks is perfect so that the transmission and absorption of the colors is incomplete and they overlap. To meet these difficulties as much as practicable the color etcher makes changes in the size of the dots in the three plates by local etching and tooling, and prints proofs from time to time until a satisfactory reproduction has been obtained. Sometimes the results are not satisfactory in spite of the very considerable time spent by the most skilful workers, and at best these operations are slow and expensive.

In modern printing practice it is customary to use three colored inks and also black ink which calls for a fourth, black, separation negative. There is no completely satisfactory method of making black plates and usually more time is spent in making hand corrections on them than on the three color plates together.

What RCA has done is to provide for automatic color correction by means of the equipment shown in Fig. 28. The principles were first demonstrated by Prof. A. C. Hardy of MIT and F. L. Wurzburg of Interchemical Corporation. RCA has taken over the final development and commercialization. The basic principles have not been changed and, in effect, consist of the electronic equivalent of an efficient color etcher and a proof press with the ability to correct dot by dot, thus saving a great deal of time. There are six steps in the operation of the equipment which will be explained briefly, one at a time.

In the first step data on the characteristics of the inks and paper are set into the computer by causing three identical scanning beams to cover photographic separations of an ink chart, prepared by printing solid areas of the ink colors singly and in double and triple overprints. The black patch is full black printed over halftone images of the colored inks, representing an appropriate undercolor. This amount of undercolor is set into the equipment by adjusting a calibrated potentiometer to whatever value is desired. Data for the inks are next set in by "looking" at the areas in the chart separations and adjusting potentiometers corresponding to each color.

The ink chart may be included with the copy and be separated with it, or a second set of separations may be made of the ink chart if the exposing and processing techniques are similar. It is not necessary to do the ink chart sep-

Helicopter Service for Progress Guests—The Progress Lithographing Co., Cincinnati, O. now has a heliport on its front lawn. The helicopter is for passenger pick-up to and from the Greater Cincinnati Airport, approx. 20 miles away. The helicopter service was used three times recently in one week.

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aration for every reproduction if the inks, paper and filter emulsion combinations and processing techniques are not changed.

In the second step the copy as represented by the three monochrome positive separations is scanned. The color separations are made with a filter-emulsion combination which approximates the spectral responses of the eye so the colors which look alike will have equal densities in the separations, and those which do not look alike will have different densities.

Step three brings the photocell signals representing the color of the copy to the computer. It may be assumed that the "electronic proof press" is printing ink colors (actually generating signals) compatible with each other but not necessarily with those of the copy. Electronically this is roughly equivalent to the engraver's first proof. Differences between the signals show up as a voltage across a resistor.

Such differences, or error voltages, are amplified in step four and fed back into the ink color generators where they are used to change the output of the ink color generators and reduce the difference voltages. This is equivalent to the manual changing of dot sizes by the color or dot etcher.

Copy color is next compared to this "second proof" in step five. It should be borne in mind that the operations described are actually continuous and take place in a very small fraction of a second, and that the difference between inks and copy is reduced to a minimum almost instantly.

In step six one of the four corrected ink signals becomes the input to the recording device where changing electrical signals modulate a light source which exposes a negative plate. The scanning and correcting process is repeated for each of the four ink colors.

The corrector makes its greatest contribution in the saving of time and expense with the black plates. The black ink signal is generated by a fourth channel and its amount is controlled by a simple function of the three color signals. It is also compatible with the other signals so that a black plate is obtained which is completely balanced with the other plates.

It is interesting to note that the RCA color correction equipment includes optical, mechanical, electronic and photographic operations which are combined to produce colored pictures from printing plates as outlined, and which will meet the high graphic arts standards now called for by the major periodicals. There are 250 electronic tubes used in the equipment.

(Concluded)

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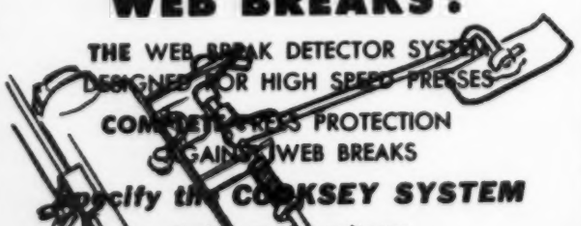

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Stripping or Photocomposing?

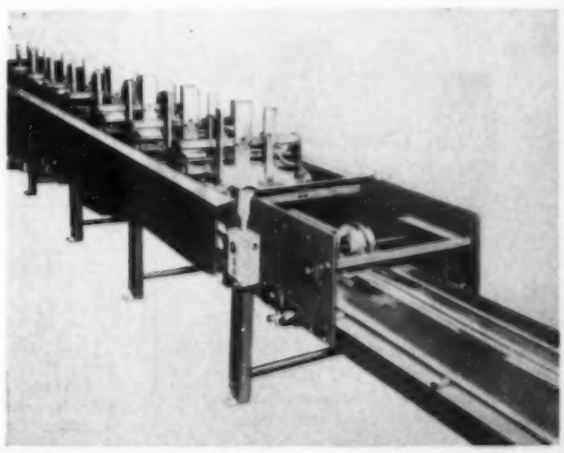
(Continued from Page 67)

4. Lower overall cost for large step-and-repeat jobs or for combinations of several step-and-repeat jobs.
5. More efficient for combination jobs where glass negatives or positives must be used.

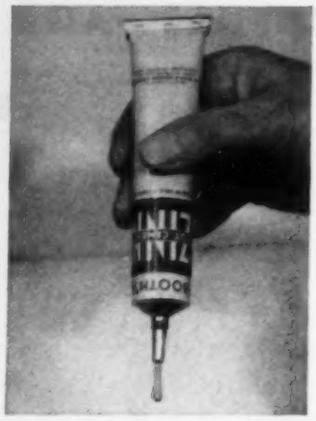
DISADVANTAGES:

1. Exposure and color variations within subject and over press plate are greater.
2. Errors in positioning and masking are not usually detected until completion of pressplate. Usually requires remaking the entire plate.
3. Involves costly press-down-time when a plate must be remade because of press difficulties or corrections.
4. More costly where duplicate plates are needed because of length of press run, or for distribution to branch plants.
5. Higher initial investment and overhead rate, requiring a high percentage of productive time to justify the installation cost.

The logical way to arrive at the decision is to select a typical month's jobs as run, or as anticipated, and then analyze them. Estimate the time required for each job if done alternately by stripping or photocomposing. Include the time needed in photography and platemaking, as well as that necessary for making duplicate sets of plates where the runs are long. In estimating, advantage must be taken of the changes in layout that each method could more advantageously provide for. In fringe cases, study the market trends for the next five years to see if a growing volume of a particular



Dexter Series 202 Collators—The Dexter Folder Co. recently announced the Dexter Series 202 collator. The machine can be used to collate either sheets or signatures ranging in size from 4 in. by 6 in. to 12 in. by 19½ in. It is claimed up to 24 sheets or signatures into as many as 3900 pamphlets or books per hour can be collated. Stacks of material are placed in hoppers or pockets located above a conveyor. The bottom sheet is separated from the pile at the rear edge by vacuum cups. Oscillating grippers then grasp the sheet, pull it from under the pile and drop it onto previously gathered units on the conveyor. Vacuum cups are adjustable and one, two or three may be used depending upon size and characteristics of the material being gathered. Two adjustable air blast nozzles also are provided at each box. Each hopper is equipped with an adjustable caliper to detect a miss or double. Machine is automatically shut off and a signal lamp is lighted at the hopper affected. Gathering conveyor is a continuous chain type equipped with pushers. The delivery conveyor is a multi-belt type. Air and vacuum are supplied by Dexter Conde pumps. Air and vacuum pumps are driven by independent constant speed motors, and a variable speed motor is used to operate the drive mechanisms. For further details, please mention PEE No. 194 in your request.



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class of work will favor one method or the other.

Precision layout and line-up tables have been on the market for many years. They are usually more accurate than the stripping technique used, particularly where films are applied to goldenrod paper or sheet plastic flats. Precision layout and line-up tables should not be confused with layout and stripping tables, as the latter are seldom equipped with accurately trued and squared edges, or with true tee-squares.

Photocomposers have a long history of successful application, but have not improved much from the basic designs developed by William C. Huebner many years ago, and from those introduced competitively by the Directoplate Corporation shortly afterwards. Although minor improvements have been added to speed up positioning and exposure time, the essential designs for holding the negative or positive, registering, and positioning on the photocomposer, have remained relatively static. There is no publicized evidence that any important design changes are in prospect that will revise operational costs downward, and accordingly the existing cost data should be satisfactory for anticipating the trend for the next five years.

Phototypesetting

(Continued from Page 58)

books. He said, however, that it was difficult to reach in and pick out book copy that would be suitable for phototypesetting. He mentioned one book containing 200 ruled tables and remarked that the results were extremely satisfactory. He also mentioned the advantages in setting type around illustrations. He said the only limitation to expanded operation of this kind of work is the development of equipment and also the lack of experience by workers doing cold composition as a disadvantage at the moment.

Phototypesetting Questions

During the question and answer period conducted by Moderator Flint, a number of questions were asked from the floor.

With reference to Lowe's discussion related to the Sears page advertisement, he was asked what would be the equivalent length of time to set this same advertisement by hot metal type composition. While he had no figures with him, he guessed from 10 hrs. to 12 hrs. would be required.

Someone asked Lowe if he had used larger point sizes of periods and commas to avoid disappearance of the periods and commas during the etching of the magnesium plates. His reply was: "Yes, 3 pts. larger."

In answer to a question from the floor, Lowe stated that the reading of lines by a fast operator makes for cleaner proofs.

In reply to a question, Fred Barnes stated that Moore Business Forms reproduces its forms plates the same size. When photocomposition was first started the copy size was

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doubled; however, this ran up production costs. He said his firm now gets such good results from the Fotosetter equipment that all of the forms are set the same size as they will appear in final printed form.

In reply to a question from the floor in which someone wanted to know why copy was set oversize and then reduced for business forms cards, Waters replied that if a 1 to 1 size were to be furnished "you can imagine the difficulties encountered in pasting it up." Personally, he said, he leans to twice the size rather than four times the size in pasteup work.

In line with the thoughts expressed by Lewis of the Macmillan Co., Charles Waters said that a percentage of Macmillan's work being set by cold composition is very small.

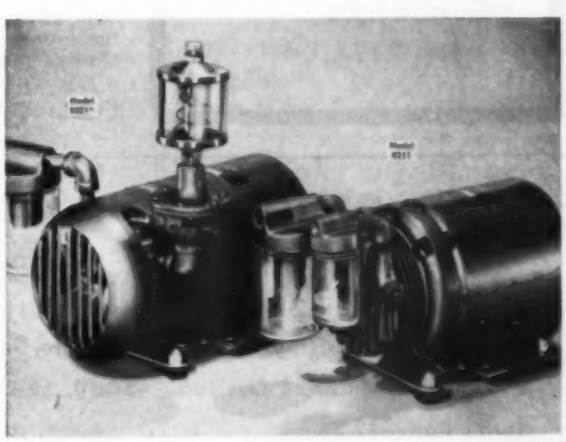
In explaining a query from the floor, Raymond Geegh stated that at the GPO, jobs are selected on a cost basis determination, that is, if the job can be done more reasonably by hot metal, it is done that way. In job work, he explained, cold type composition is largely a matter of convenience. Sometimes it is necessary to arbitrarily use another process because certain equipment is busy. The cost setup in your own plant should be the determining factor. "In no two shops are the costs alike", he said. For instance, in bookwork with large areas of white space where it would be necessary to fill in the form with furniture or slugs on account of the white space, the job should go to cold composition. Forms work is particularly adaptable to cold composition. Quality is best on phototypesetting, he concluded.

Geegh also explained that wax is the adhesive used at the GPO for pasteups rather than rubber cement. He related that in three years time only one patch had fallen off a matte finish paper and none at all on coated stock. The use of wax has saved 25% in the pasteup time at GPO. Wax comes off easily by using a solvent. He warned that the use of benzol as a solvent is taboo at the GPO.

From the comments made by panel members and a number of remarks from the floor, it appeared that the use of wax rather than rubber cement for pasting up layouts has become standard practice. "And besides," said Paul Miller, "it's a much cleaner operation."

There was one comment to the effect that a No. 6 Paasche spray gun is being used in one plant to spray wax on the proofs which are to be attached to the layout. The wax is kept a little on the warm side for best adhesive properties.

Edward Triebe, executive vice president, Kingsport Press, Kingsport, Tenn., wanted to know if there was any advantage in spacing on the Photon machine over hot metal typesetting. The answer was "the operator must be just as careful."



Rotary Air Pumps — Three Gast rotary air pumps have been announced by Gast Manufacturing Corp. Common to the three models is the rotor mounted on the shaft of the type G.E. Form G motor. All models can be used as original equipment on automatic machines, industrial instruments and controls, printing and photoengraving equipment, and as portable laboratory air sources. Model 0211 is equipped with a 1/6 h.p. motor and weighs 22 lbs. It is constructed with rubber-cradled motor mount and is used to deliver up to 1/3 cu. ft. per min. of free air at 1750 r.p.m., with vacuum to 27 in. or pressure to 25 p.s.i. Model 0321 is used to deliver up to 2.2 cu. ft. per min. with ¼ h.p. motor. Vacuum is produced to 28 in., pressure to 25 p.s.i. Model 0521 is used to deliver air volume to 3.8 cu. ft. per min., with 1/3 h.p. Both larger models are equipped with forced air fan cooling. For further details, please mention PEE No. 195 in your request.

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Wrestling with mat problems that might conceivably end up with being thrown for a loss on that well known front office mat? We suggest you call on a Beveridge salesman and Beveridge Quality Mats, to help you win "mat difficulties" wrestling bouts. Ask about Beveridge Mats for syndicate work and the improved Beveridge Newspaper Mats. Reproduction-wise, they're champions.

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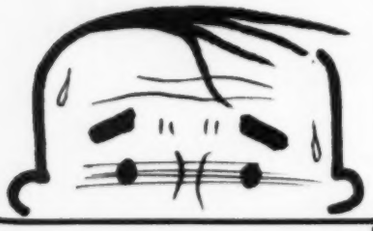

WHY?

Why didn't I think of that! Of course, I can find it in the yellow pages of the 23rd Annual PRINTING EQUIPMENT Engineer "Where to Buy" Printing Equipment and Supplies Reference Issue.

Relief Plates

(Continued from Page 59)

The solid areas of molded rubber plates wear out before other portions of the plate because the high edges on the solids of a molded rubber plate cause the pressman to put more pressure on the center. The solution was advanced that two durometer rubber plates should be ordered when solids predominate in the plate.

Chairman Mawicke, in answer to a question regarding duplicate plates stated there isn't too much difference between a photoengraving and an electrotype if the engraver makes the plates properly and if the electrotyper does not pound the back of the plate in the finishing operation.

It was brought out in the discussion that there is no particular advantage in nickeling or chrome plating an electrotype so far as performance is concerned.

A considerable number of plants now vulcanize rubber plates to a brass saddle without using sticky-back to hold plate and base together.

Certain types of ink etch or pit magnesium plates in runs of 100 thousand impressions or more. The reason is that inks containing iron pigment, ferrous cyanite blue or acid will attack magnesium. If possible the magnesium plates should be chrome plated.

Dwight Monaco, Hughes Corporation, wanted to know "when we are going to get a cheaper plate for letterpress magazine printing." He was speaking of one and two color plates. Chairman Mawicke replied that the industry will have to start to get rid of its old equipment and endeavor to attain quality. Monaco asserted that electrotypes are too expensive at a cost of $9 to $12 per plate. "What we need", he said "is a plate that can be purchased for $5 apiece." He also asserted that the magazine publisher is being squeezed on account of higher plate production cost. D. R. Preston of Crescent Engraving Co., Kalamazoo, Mich., stated: "I resent the implication that platemakers are not making any effort to provide a cheaper and better printing plate." Monaco's rejoinder was that he was asking for "even greater effort" on the part of the platemakers.

Other Important Actions-Addresses

Among the committee and industry research reports the final report of the maintenance committee was presented. Christian E. Burckel of Christian E. Burckel and Assoc., Yonkers, N. Y., reported for Chairman Walter S. Reed of Dexter Folder Co. Burckel reviewed the previous three reports which had been submitted to the Council, defining each type of printing plant maintenance. In the final report presented by Burckel to the

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Council, he stated that the maintenance committee had prepared a treatise with respect to the preparation of equipment maintenance manuals. It is the recommendation of the committee that printing equipment manufacturers permit the Research and Engineering Council to review copy for parts and maintenance manuals before printing them.

Electrofax Process

M. L. Sugarman, David Sarnoff, Research Center, Radio Corp. of America, spoke on the Electrofax Process. At the moment, he said the industry should not get too excited about Electrofax. Essentially, the Electrofax process can be used to print with light. So far, 78 companies in the U. S. and 17 in foreign countries have been licensed to use the process.

Printing on Foil

P. T. Pope of Pope and Gray, Inc., and Donald Pingree, Kaiser Graphic Arts, Oakland, Calif., presented a joint report on Lithographic Printing on Foil. See summary on another page in this issue.

Strictly in the Stars

Michael Bruno, research manager for the Lithographic Technical Foundation discussed the work the laboratories are doing. Among other items he mentioned was that the Air Force wants the Foundation to develop a plate for printing two colors from one plate at the same time. He said that he wouldn't draw that assignment because "it is strictly in the stars."

Publication Presses

Wayne R. Marcoullier, sales engineer, The Goss Printing Press Co., by means of a number of diagrammatic slides projected on a screen, explained his company's research in designing presses for publication printing. Included are joint programs with Time, Incorporated and Hughes Corporation for whom his company is building publication presses.

Air Conditioning Address Constructive

Planning for Air Conditioning was

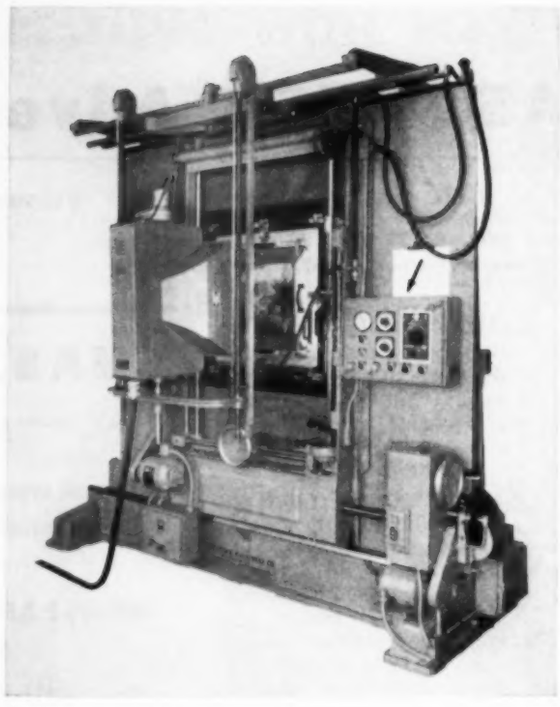
the subject of an address delivered by J. J. Floreth, manager, Central District, Industrial Div., York Corporation. Obviously, most people think of air conditioning in relation to human comfort. Floreth's address, however, showed that it can be a valuable production tool.

With respect to people in general, labor turnover is minimized in air conditioned plants as much as 25% and absenteeism has been reduced at least 20%.

The variation in the control of relative humidity, on a 25 in. by 38 in. sheet, the sheet will vary in measurement as much as 1/6th in. He discussed damage to roll paper stored without benefit of air conditioning, the aggravating effects of static electricity and the behavior of ink which cannot be dried because of excess moisture in the air.

In constructing a new plant, as much as 20% in construction costs in a modern one story plant can be saved if the building is to be air conditioned. Windowless air conditioned plants permit better utilization of floor space. Where windows are to be installed, special glass and shading devices can be used to reduce air conditioning costs. He suggested carefully considering the matter of providing adequate roof insulation. Properly enclosed windows reduce the amount of dust and soot that can enter the building. Replacement of incandescent lights with modern fluorescent fixtures reduces heat sources and should be seriously considered.

Floreth also suggested that a competent air conditioning engineer from a reliable company should be consulted. As a further word of warning he stated an inexperienced contractor can defeat the best plans of competent air conditioning manufacturers and engineers. "Please beware of last minute cuts to compromise with a fixed budget the cost of the building," he concluded.



Photocomposing Machine—A new model Rutherford Machinery Co. Type RMH Precision Photo Composing Machine, with the Automatic Sequence Control (see arrow). Addition of this control helps maintain precision and simplifies operation. The negative holder must be placed in its correct lineal position. Then, pressing one button automatically sets off a chain of events from the backboard moving into position to proper exposure to backboard moving back out of position. According to Sun Chemical Corp., its Rutherford Machinery Co. division completed pilot tests on the control after 4 years of research. Among other advantages, the control does not have to be enclosed in a separate room for exposing press plates; negative holders can be turned from 90 deg. to 180 deg. to 270 deg. to 360 deg. without reregistering; tall or small operators can handle with the same ease. For further information, mention PEE No. 198 in your request.

ADVERTISERS' INDEX

AUGUST 1956

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Acme Telectronix, Div. of NEA Service, Inc. 40
Alan Wood Steel Co. 86
American Publishers Supply, Inc. ..98, 102, 104
American Roller Co. 11
American Type Founders, Inc. 38, 39
Ansco, Div. of General Aniline & Film Corp. 24
Atlantic Zinc Works 81

Baum, Russell Ernest 99
Beveridge Paper Co., New Products Div. . 106
Booth, E. A., Rubber Co. 104
Burgess Cellulose Co. 28
Byron Weston Co. 19

Carlson, Chesley F., Co. 102
Certified Dry Mat Corp. 101
Challenge Machinery Co., The 31
Champlain Company, Inc. 8
Chandler & Price Co. 80
Cheshire Mailing Machines, Inc. 101
Continental Enterprises Co. 100
Cottrell Company, The, Sub. of Harris-Seybold Co. 54, 55
Curtis Laboratories, Inc. 13

Dexter Folder Co. 32, 33
Dow Chemical Co., The 27
Dutro, Orville, & Son, Inc. 94

Eastern Newspaper Supply, Inc. 82
Electric Eye Equipment Co. 15

Fairchild Graphic Equipment, Inc. 29
Federated Metals Div., American Smelting and Refining Co. 83
Filmotype Corporation, The 97
Fisk 104
Flint, Howard, Ink Co. 84
Force, Wm. A., & Co., Inc. 18

Gegenheimer, William, Co., Inc. 35
Goss Printing Press Co., The 17
Graphic Arts Corp. of Ohio 105
Graphic Arts Industry, Inc. 98

Hammond Machinery Builders, Inc. ..... Inside back cover
Herbert Products, Inc. 103
Herrick, Wm. C., Ink Co., Inc. 26
Hess & Barker 34

Ideal Roller & Mfg Co. 7
Imperial Type Metal Co. 87, 90
Interchemical Corporation, Printing Ink Div. 20, 21
Intertype Corporation ..... Outside back cover

Korthe Engineering Co. 102

Lake Erie Engineering Corp. 41
Lanston Monotype Machine Co. 79
Ludlow Typograph Co. 9

Magnacraft Manufacturing Co. 10
Main, Chas. T., Inc. 107
Matrix Contrast Corp. 42
Mead Papers, Inc. 3
Mergenthaler Linotype Co. 73
Midwest Publishers Supply Co. 106
Morrill, Geo. H., Co., Div. of Sun Chemical Corp. 75
Morrison Company, The 93

New England Newspaper Supply Co. 99
New York & Pennsylvania Co. 25
Nolan Corporation 18, 103

Offen, B., & Co. 106
Oxy-Dry Sprayer Corp. 14
Patton Manufacturing Co. Inc. 88
Printing Equipment Engineer 102, 104, 106, 107

Rapid Roller Co. 14
Richards, J. A., Co. 100
Rosback, F. P., Co. 83
Rouse, H. B., & Co. 91, 96

Scott, Walter, & Co., Inc. 2
Sheridan, T. W. & C. B., Co. 12
Shulman, Ben, Associates 107
Signode Steel Strapping Co. 6
Simco Company, The 93
Southworth Machine Co. 77
Sta-Hi Corporation 1
Standard Process Corp. 95
Star Cement Co. 107
Star Parts, Inc. ..... Inside front cover, 90
Staude, E. G., Mfg. Co., Inc. 22

Teletypesetter Corporation 37
Tingue, Brown & Co. 22

Universal Mono-Tabular Corp. 30

Vandercook & Sons, Inc. 89

Wetter Numbering Machine Co. 92
Wood Flong Corp. 105
Wood Newspaper Machinery Corp. 4

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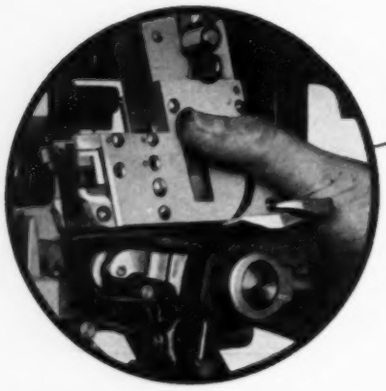
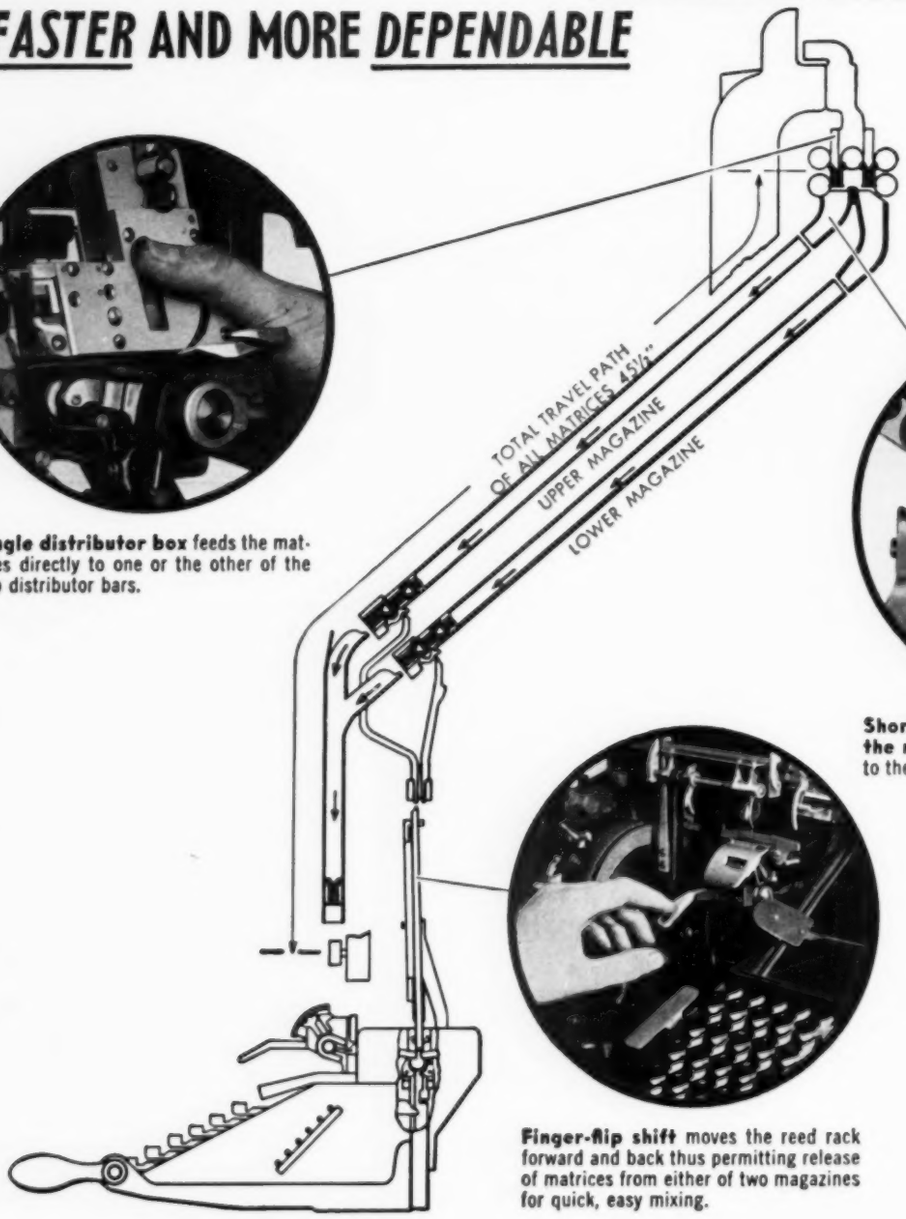
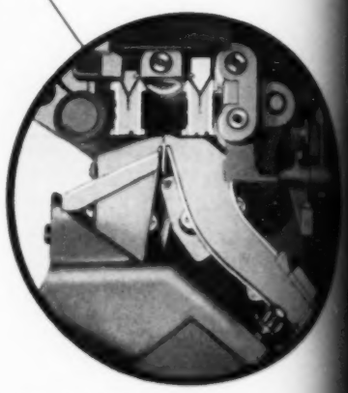


Single distributor box feeds the matrices directly to one or the other of the two distributor bars.





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